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*John*

OAK ELECTRO/NETICS CORP

**1970  
ANNUAL  
REPORT**



# HIGHLIGHTS

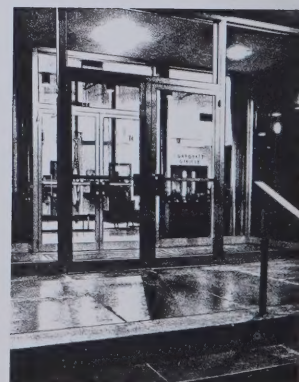
|   | 1970         | 1969         |
|---|--------------|--------------|
| Net Sales .....                         | \$75,056,484 | \$85,629,695 |
| Income (Loss) Before Income Taxes ..... | (1,003,849)  | 3,209,635    |
| Provision for Income Taxes .....        | (555,000)    | 1,651,000    |
| Net Income (Loss) .....                 | (448,849)    | 1,558,635    |
| Per Common Share .....                  | (\$.49)      | \$.74        |
| Average Common Shares Outstanding ..... | 1,637,204    | 1,636,253    |
| Cash Dividends Paid—Common Stock .....  | \$ 523,915   | \$ 969,962   |
| Per Common Share .....                  | \$.32        | \$.64        |
| Shareholders' Investment .....          | \$23,522,554 | \$24,847,091 |
| Number of Shareholders .....            | 5,335        | 5,104        |
| Number of Employees .....               | 6,512        | 7,312        |

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### ABOUT THE COVER

Main entrance of O/E/N's corporate headquarters and principal plant of Oak Manufacturing Co. in Crystal Lake, Illinois. Facility contains 206,000 square feet of engineering, production and office space and serves as focal point of O/E/N operations world wide.





## To Our Shareholders:

As we indicated in last year's annual report, the same factors that depressed the economy in 1969 continued during 1970 and, as a result, your company reported the first loss in its 25 years of public ownership.

The economic consequences of a change from inflationary conditions of the 1960's to the imposition of severe money restraints in mid-1969, resulted in climbing unemployment, sharply rising prices, sluggish business activity and diminishing corporate profits.

The pressures were particularly severe in the consumer, commercial and industrial electronics markets important to OAK ELECTRONICS CORP.

While there is no doubt the current situation is temporary, the key challenge facing O/E/N management is to adjust operations to compensate for volume declines without sacrificing the future. We believe these adjustments are being accomplished.

During the past two years, O/E/N initiated severe cost reduction programs, but throughout these efforts your management has anticipated resumption of growth trends. Thus, in 1969 and 1970, research and development activities were curtailed but not stopped; capital expenditures for new plants, machinery and equipment were contained, but not eliminated, and advertising and related selling expenses were cut, but not to the point of stifling marketing efforts.

Your management is convinced that the electronics industry will continue as one of the major foundations of an expanding national economy.

And while O/E/N did not achieve profitability in 1970, our employees performed with unity and dedication throughout the year. Extensive in-plant communications stressed management's confidence in both the recovery and continued growth of the electronics industry and O/E/N's intention to remain a significant and growing factor in the materials and components field.

As you will read on the following pages, O/E/N entered 1971 in a sound financial position and with a good product line—both of which should permit profits a participation in the early resumption of our nation's economic growth.

March 4, 1971

E. A. Carter,  
Chairman of the Board  
Chief Executive Officer



# HIGHLIGHTS

|   | 1978         | 1979         |
|---|--------------|--------------|
| Net Sales .....                         | \$75,036,194 | \$85,629,695 |
| Income (Loss) Before Income Taxes ..... | (3,831,849)  | 3,209,635    |
| Provision for Income Taxes .....        | (535,000)    | 1,651,000    |
| Net Income (Loss) .....                 | (445,249)    | 1,558,635    |
| Per Common Share .....                  | (\$.49)      | \$.74        |
| Average Common Shares Outstanding ..... | 1,637,204    | 1,636,253    |
| Cash Dividends Paid—Common Stock .....  | \$ 323,915   | \$ 969,962   |
| Per Common Share .....                  | \$ .32       | \$ .64       |
| Shareholders' Investment .....          | \$23,522,554 | \$24,847,091 |
| Number of Shareholders .....            | 5,335        | 5,104        |
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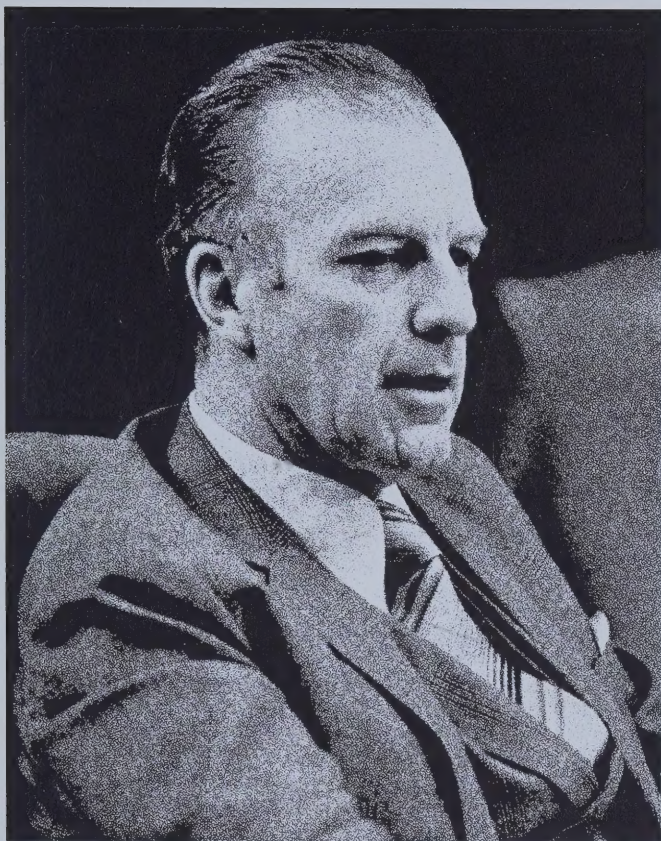
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**WORTH INC. EXPANSION**  
 Since acquisition of O/E/N, the  
 parent headquarters and principal  
 plant of West Manufacturing Co. in  
 Bristol, Tenn. 37620. Facility con-  
 tains 226,000 square feet of engi-  
 neering, production and office  
 space and serves as focal point of  
 O/E/N operations world wide.







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The economic consequences of a change from inflationary conditions of the 1960's to the imposition of severe money restraints in mid-1969, resulted in climbing unemployment, sharply rising prices, sluggish business activity and diminishing corporate profits.

The pressures were particularly severe in the consumer, government and industrial electronics markets important to OAK ELECTRO/NETICS CORP.

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And while O/E/N did not achieve profitability in 1970, our employees performed with loyalty and dedicated effort throughout the year. Extensive in-plant communications stressed management's confidence in both the recovery and continued growth of the electronics industry and O/E/N's intention to remain a significant and growing factor in the materials and components field.

As you will read on the following pages, O/E/N entered 1971 in a strong financial position and with a sound product base—both of which should permit profitable participation in the early resumption of our nation's economic growth.

March 8, 1971

A handwritten signature in dark ink, appearing to read "E. A. Carter". The signature is fluid and cursive, with a long horizontal stroke at the end.

E. A. Carter,  
Chairman of the Board  
Chief Executive Officer



# The O/E/N Performance

## Sales

Consolidated net sales of OAK ELECTRO/NETICS CORP. in 1970 totaled \$75,056,484, down 12 per cent from \$85,629,695 in 1969. Figures for both years include operations of Atlantic Laminates, Inc. of Franklin, New Hampshire, acquired in February 1970.

Volume declines were directly attributable to the U.S. economy and its effect on sales of television sets, home appliances and the military segment of the electronics industry . . . all markets important to O/E/N. Sales of industrial components rose despite an overall volume drop in the industrial electronics sector.

## Market Distribution

Industrial component sales totaled \$27.7 million, or 37 per cent of 1970 volume, compared with \$27 million, or 32 per cent of 1969 consolidated sales. The rise was directly attributable to new products for markets not previously served.

Component sales to the military dropped to \$8 million, or 11 per cent of 1970 volume, compared with \$12.3 million, or 14 per cent of the previous year's sales.

A percentage breakdown of O/E/N sales to principal markets for the past three years follows:

|                            | 1970 | 1969 | 1968 |
|----------------------------|------|------|------|
| Television .....           | 15%  | 17%  | 24%  |
| Industrial Electronics ... | 37   | 32   | 28   |
| Appliance .....            | 30   | 28   | 24   |
| Military .....             | 11   | 14   | 18   |
| Consumer .....             | 7    | 9    | 6    |

## Earnings

The volume performance resulted in the first loss in the company's 25 years of public ownership, amounting to \$448,849. This is equivalent to 49 cents a share on 1,637,204 average common shares outstanding after deduction of 1970 preferred dividends. In 1969, the company reported net income of \$1,426,290, equivalent to 66 cents a common share on 1,636,253 average shares outstanding before a special credit of \$132,345, or 8 cents a share.



More than 200 shareholders attended the company's 1970 Annual Meeting.





The 1971 Stockholders' Meeting is scheduled for Friday, May 7, at the company's headquarters in Crystal Lake, Illinois.

## Acquisitions

In February 1970, O/E/N acquired Atlantic Laminates, Inc. of Franklin, New Hampshire. The company specializes in laminating copper foil to epoxy-glass preimpregnated materials to form a laminate for printed circuit boards used in computer, data processing and related electronic applications.

Its products complement the copper clad laminates of Dodge Industries and are being marketed by the Dodge sales organization.

## Dividends

Cash dividends on the common stock were 32 cents a share, compared with 64 cents in 1969.

Dividends were successively lowered to maintain a strong cash position. Payments of 16 cents in the first quarter, 8 cents in the second and 4 cents in each of the third and fourth quarters totaled \$523,915, compared with \$969,962 in 1969.

Regular quarterly dividends, totaling \$351,560 in 1970, were paid on the \$4.375 Cumulative Convertible Preferred Stock.

## Backlog

O/E/N entered 1971 with a \$20.9 million backlog, up 3.5 per cent from \$20.2 million a year earlier.

## Capital Expenditures

Gross capital expenditures were \$3.2 million, compared with \$3.3 million in 1969.

Approximately \$330,000 was spent for new facilities in Torrance, California, and the balance for expanded microelectronics facilities and machinery, equipment and new product tooling.

Capital expenditures for 1971 are projected to be at the same level as 1970.

## Cost Reductions

O/E/N continued extensive cost reduction programs, most important of which were plant consolidations.

Harper-Wyman Company sold its 63,000 square foot facility in Downers Grove, Illinois and is moving these operations to an expanded plant in Princeton, Illinois. The consolidation will result in more efficient use of equipment, space and manpower.





Opened in August 1970, the new 30,000 square foot facility of LAMPS in Torrance, California provides the company with 15,000 square feet of column-free production space. The new building is of concrete tilt-up construction containing no windows. The walls were precast in a flat position and raised in just five hours' time.

### Cost Reductions (cont.)

Miniature lamp production, formerly in two leased facilities in Gardena, California was moved into a new company-owned 30,000 square foot plant in Torrance, California. Two operations of Techno-Components Corp., Van Nuys, California were combined into a leased, single 15,000 square foot location, providing lower manufacturing costs and improved efficiencies.



## Financial Position

O/E/N ended the year with a strong balance sheet and no expectations of long-term financing for 1971.

Consolidated net working capital at December 31, 1970 was \$22,524,898, compared with \$24,899,131 at the previous year end. The ratio of current assets to current liabilities at year end was 2.9 to 1, the same as 1969.

Net reductions in the company's long-term debt amounted to \$749,696, including a \$400,000 payment in accordance with repayment terms of a 5 per cent note due in annual installments through 1984.

Short term bank notes were reduced by \$464,059 and stood at \$3,847,561 at the end of 1970, well below existing lines of credit.

Stockholders' equity at year end was \$23,522,554, compared with \$24,847,091 at December 31, 1969. Assuming conversion of the subordinated convertible debentures and the preferred stock, book value per share amounted to \$11.15, compared with \$11.80 at year end 1969.

## Employee Relations

O/E/N's employee relations remained excellent throughout the year as evidenced by continuing preference for union-free relationships by 92 per cent of the company's U.S. employees.

There were no labor contracts negotiated in 1970 other than a wage reopener clause successfully concluded in Elkhorn, Wisconsin.

Four contracts are scheduled for negotiation in 1971 covering tool room employees in Crystal Lake and Princeton, Illinois, assembly employees in Elkhorn, Wisconsin and production workers at Harper-Wyman de Mexico in Mexico City.

Based on past experience, the company foresees no developments to mar its satisfactory relationships with represented employees.

Salaries and wages paid to employees in 1970 totaled \$28,271,524, compared with \$30,820,496 in 1969. Employees at year end totaled 6,512, down from 7,312 on December 31, 1969.

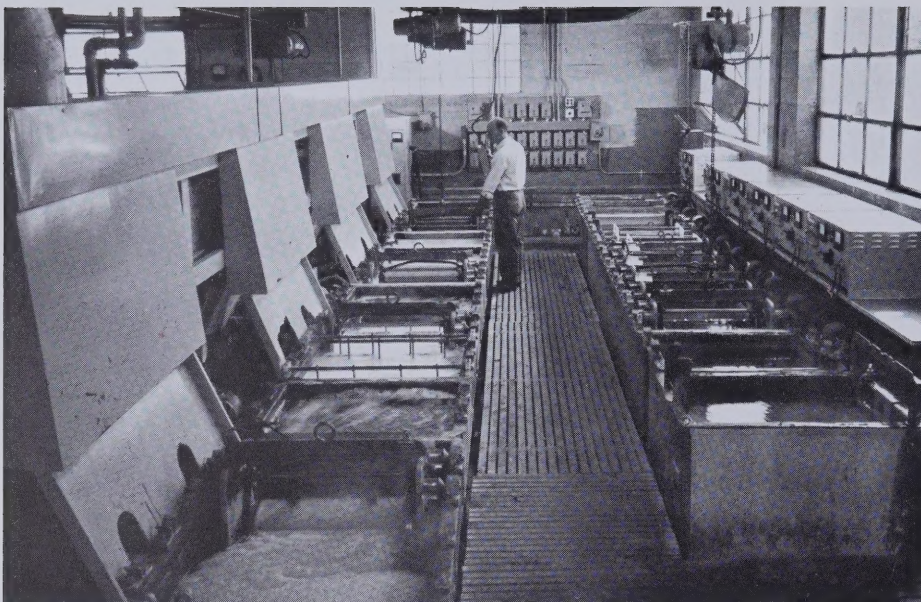


Almost 3,000 Oak Crystal Lake employees and their families attended the annual company picnic in September, 1970.

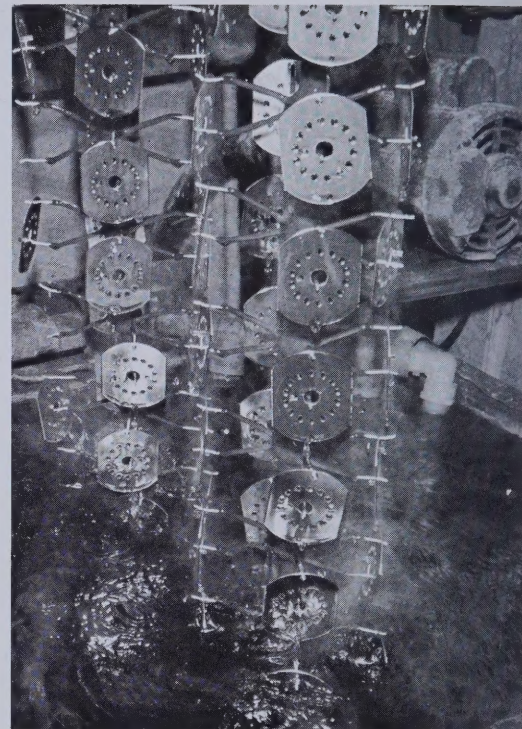


Special graduation ceremonies are held at regular intervals to award certificates to employees who have completed courses offered under the Oak Adult Education Program.





The Oak Switch Division's silver plating line, where small parts such as rotor blades, clips and eyelets are bulk plated, includes several rinsing stations as part of the final process.



Larger components and certain irregularly-shaped parts, such as tuner chassis and switch plates, are individually racked prior to plating. Following a dip rinse, the racks are then attached to a conveyor which carries them through a dryer oven.

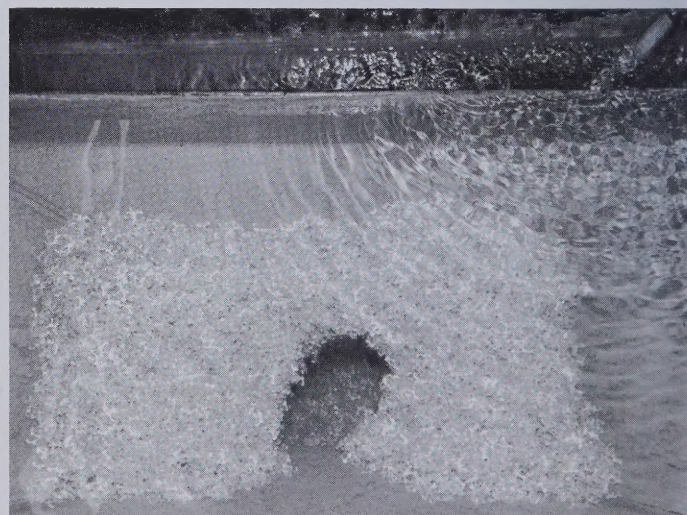
## O/E/N and Environmental Control

Component producers such as O/E/N are essentially non-polluters. The characteristics of the company's product lines and their assembly are such that pollution of any type is minimal.

In 1966, long before ecology became the watchword of conservationists, the Oak Switch Division in Crystal Lake embarked on a long-range program to eliminate contaminants resulting from its plating operation. In February of that year its tin-zinc plating process was eliminated by substitution of pre-plated raw materials for fabricated parts. Shortly thereafter, the division converted its cyanide-zinc plating process to a newly-developed non-cyanide process. At the same time, an effluent analysis program was established with the Crystal Lake City Engineering Department and Water Works Plant Superintendent.

As a result of these studies, Oak plans to spend approximately \$200,000 over the next three years for new equipment which will eliminate all traces of pollutants.

The system will be a "closed loop" type that destroys and removes contaminants and returns a portion of the water for reuse in the electroplating process.



Batches of small silver-plated components are placed in a rinse-water solution, then dried in a small centrifugal oven.



# Operations Review

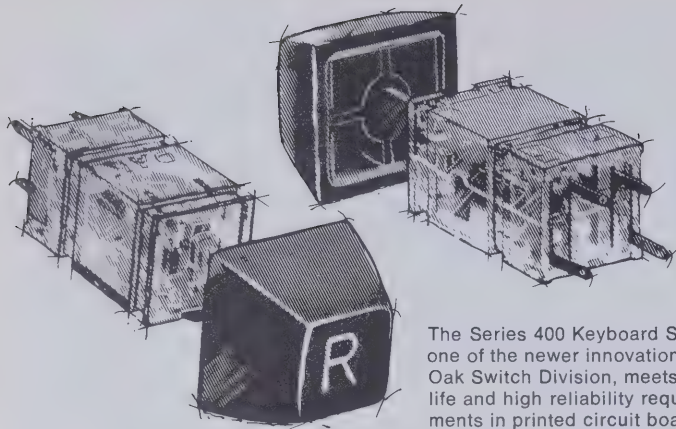
## RESEARCH AND ENGINEERING

Total O/E/N investment in engineering and product research at corporate and divisional levels, amounted to \$3.5 million in 1970, equivalent to 4.7 per cent of sales, compared with \$3.3 million or 3.9 per cent of sales a year earlier. A significant number of new products were introduced during the year, reflecting dedication to a strong ongoing development program in the face of temporary declines in overall business conditions.

Greater computer utilization in the design of McCoy filters and oscillators improved customer service and cut costs. Programming of design criteria and intelligence simplifies and reduces design time, allowing faster order quotations to customers. Computer usage is expected to reduce design engineering time by 20 to 25 per cent in 1971 from 1970 levels.







The Series 400 Keyboard Switch, one of the newer innovations of the Oak Switch Division, meets long life and high reliability requirements in printed circuit board applications for the computer peripheral market.

## OAK SWITCH DIVISION

New product introductions enabled the Oak Switch Division to increase its share of the low power rotary and pushbutton switch market.

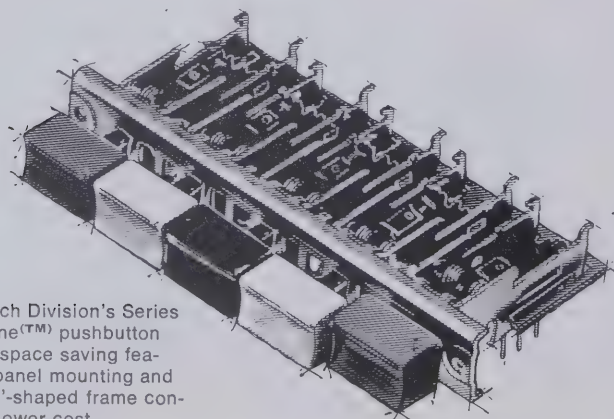
The division's strong position in the fast-growing pushbutton switch area was augmented by introduction of a new series of keyboard switches for the calculator and peripheral equipment markets.

The "Switch-in-a-Button" concept, introduced last year, was expanded to three versions available for such commercial applications as bank terminals, reservation and credit verification systems.

A complementary Series 400 Keyboard Switch was introduced for long life and high reliability applications, mainly in instrumentation, test equipment and special function keys for computer peripheral equipment.

Scheduled for 1971 introduction are lighted front ends for the Series 300 Long Life and 800 Economy Pushbutton Switches and a prism button for the same series.

These developments will enhance the overall sales potential of pushbutton switch products, particularly with emphasis shifting to lighted displays, providing greater opportunity to penetrate the growing illuminated pushbutton switch field.



The Oak Switch Division's Series 800 Econo-Line<sup>™</sup> pushbutton switch offers space saving features, direct panel mounting and a rugged, "U"-shaped frame construction for lower cost instrumentation applications.

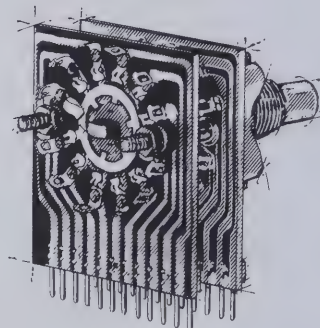
**Solenoid Line Expanded . . .** The Oak Switch Division also introduced a variety of redesigned rotary solenoid subassemblies featuring a plug-in unit that is assembled into the finished product on a high-volume production line or easily replaced in the field.

The units perform a number of functions from simple counting to complete programming. For example, in office copiers one of the units could fully control turn-on and turn-off of various lights, heaters or drive mechanisms.

## SELECTRONICS INCREASES TUNER MARKET SHARE

The Selectronics Division, producers of conventional VHF television tuners and converters for Community Antenna Television Systems (CATV), increased its market share of VHF tuners through the addition of new customers and expanding volume with existing customers.

The strong showing was noteworthy in view of 1970 market conditions. Domestically, distributor-to-dealer sales of television sets declined 11 per cent from 10.5 million units in 1969 to 9.4 million in 1970. Moreover, television imports—mostly from Japan—rose more than 12 per cent from 4 to 4½ million units.



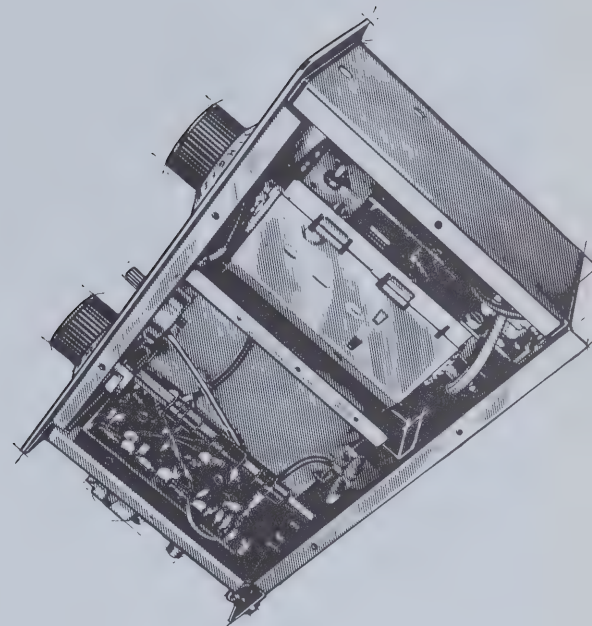
A 12-position switch for printed circuit board applications, also new from the Oak Switch Division, measures slightly more than 1-inch square and features the Unidex mechanism. Applications for this switch are found in ground support and communications equipment and microwave installations.

O/E/N has ensured its participation in this growing market through a licensing agreement with Murata Mfg. Co. of Kyoto, Japan. Murata, a highly regarded components producer, sells Selectronics-designed tuners to Japanese set manufacturers. O/E/N receives royalties from all such units sold.

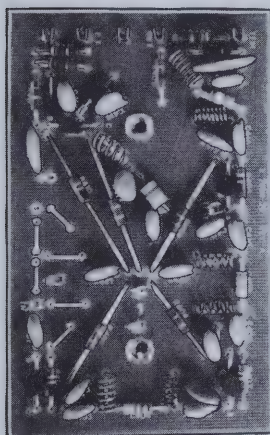


**New CATV Products...** In 1970, the Selectronics Division significantly expanded its line of products for the CATV industry. In addition to conventional converter units, Selectronics now offers block converters, RF switches, 2 and 4-way splitters, bandpass filters and PIN diode switches, all designed specifically for CATV applications.

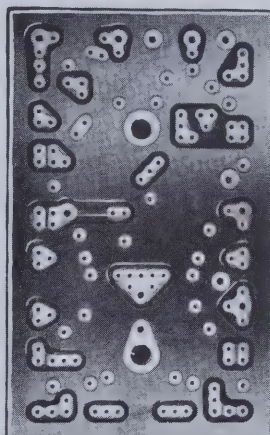
Further expansion of the CATV product line will include decoders for private channel transmissions. These include special event entertainment and data transmission for home subscribers; educational channels; medical channels for physicians and surgeons; channels for stockbrokers, bankers and other businessmen; merchandise displays for wholesalers and retailers, and professional and public educational instruction channels.



Two major components of the Gamut 26 converter are a back-to-back oscillator which provides the 26 separate and distinct frequencies, and the IF board which performs both selectivity and amplifying functions.



Transistors, capacitors and coils are inserted into an Intermediate Frequency board, and the leads crimped and trimmed prior to going through a solder bath in which all component points are soldered in one operation. The IF board then becomes a circuit module which performs both selectivity and amplifying functions in the Gamut 26 converter.



Reverse side of the IF board shows solder mask with pre-determined design. Only those points not covered with the mask are soldered.

**CATV Outlook Bright...** CATV systems carry television signals into homes via cable as opposed to conventional airwave transmission. The Selectronics' line of converters purifies signal reception, eliminates ghosting and, in the case of block converter models, increases the channel capacity of a cable system far beyond the standard 12 channels. Each cable subscriber requires a converter to receive the extra channels being offered by all new CATV systems.

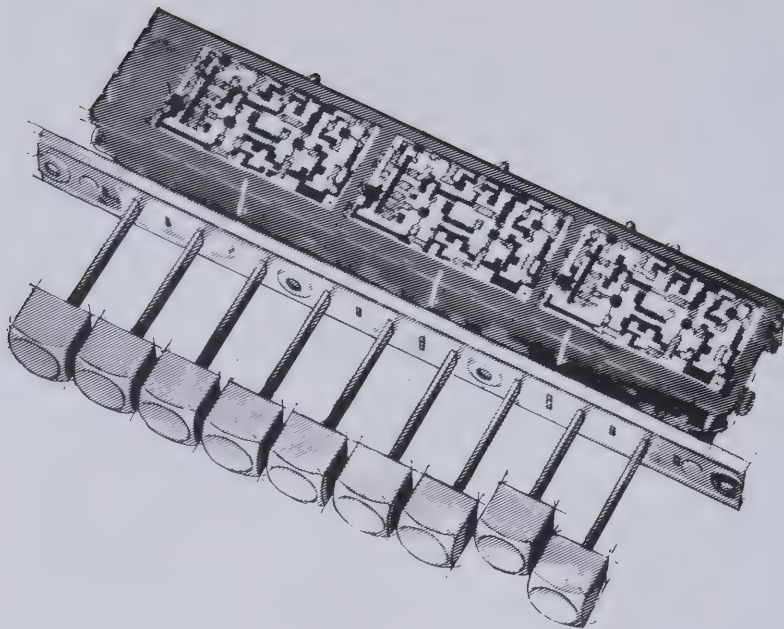
In large market areas where many TV stations are transmitting strong signals, the converter permits interference-free reception of UHF and VHF signals.

Currently there are some 2,400 CATV systems in operation in the U.S., compared with approximately 2,000 a year ago, serving about 14.4 million people or only 7 per cent of the total population.

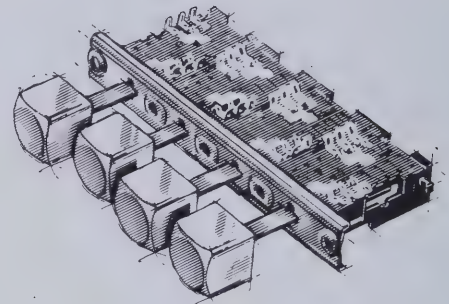


The Selectronics Division's new Gamut 26 CATV converter, capable of receiving 26 channels, purifies signal reception and eliminates ghosting.





O/E/N's microelectronic capability is adaptable to traditional products such as rotary and pushbutton switches, and TV tuners. The plug-in ceramic rectangles on this Oak Type 130 Pushbutton Switch act as carriers for complete circuitry, formerly achieved through hand-wiring techniques.



The Oak Switch Division's new Series 300 molded pushbutton switch is ideally suited for Electronic Data Processing, data entry and other instrumentation applications where fast response and light touch features are required.

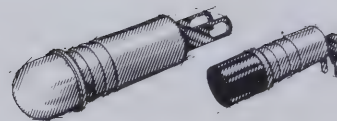
#### **Microelectronics Moved to Far East . . .**

Microelectronics operations, consisting principally of integrated circuit modules for TV tuner applications, were transferred to Hong Kong in 1970. The crossover from conventional tube and transistorized television tuners to integrated circuit and Varactor units is expected to be gradual during the next five years. Accelerated use of solid state tuners is anticipated in color TV set receivers where increasing hybridization, as well as more all-solid-state models, have been noted during the past several months.

#### **MARCO-OAK EXPANDS COMPONENTS LINE**

Marco-Oak Industries again placed heavy emphasis on product development efforts with 19 additions to its growing line of indicator lights and illuminated pushbutton switches.

Virtually all the new components were designed to meet new customer applications in data processing, computers, commercial and military telephone equipment, aircraft, heavy industrial equipment, construction machinery and test equipment.



With the introduction of its "QT" series of low-cost indicators and momentary switches, Marco-Oak is able to meet a wide variety of computer and industrial equipment applications. The new product line offers many advantages to the user such as snap-on replaceable lens caps, elimination of mounting hardware and tool-free easy front-of-panel replacement.



Overall design consideration continues in the area of miniaturization and compatibility with solid state switching, with particular emphasis being placed on developing a more attractive and broader selection of front panel styles while standardizing mechanisms behind the panel.

Among the new product introductions, particular customer acceptance was noted for the Marco "QT" series of low-cost indicators and momentary switches for a wide variety of computer and industrial equipment applications.

**QPL Program Opens New Markets . . .** In conjunction with its new product effort, the Anaheim company also completed a two-year military qualification program that resulted in 44 products meeting appropriate government specifications. This program, coupled with a better military sales and distribution organization, is expected to result in a substantial increase in 1971 military sales over 1970—all to be derived from markets not previously available to Marco prior to approval on "Quality Product Listings."

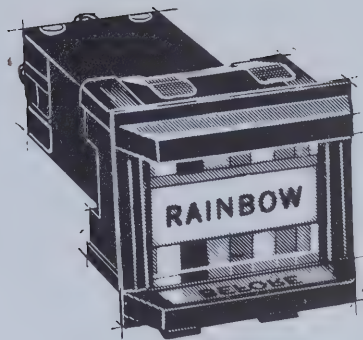
#### Marketing Organization Strengthened . . .

Marco continued to expand and restructure its marketing organization and by year end, more than 150 distributor and direct salesmen were selling its products nationally.

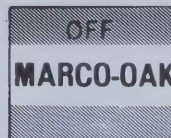
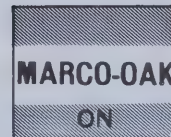
One tangible result of this effort was the addition of almost 100 new customers for Marco products. These new accounts cushioned the impact of sluggish market conditions. As a result, sales of indicator lights and illuminated switches declined just 4 per cent from 1969 levels.

**Cost Reductions . . .** Standardization of many component lines for distributor sales permitted significant cost reductions in applications engineering time normally required on custom orders. Additionally, by the end of 1971, almost \$500,000 will have been spent on a three-year product development program, including expenditures for tooling and automated production equipment.

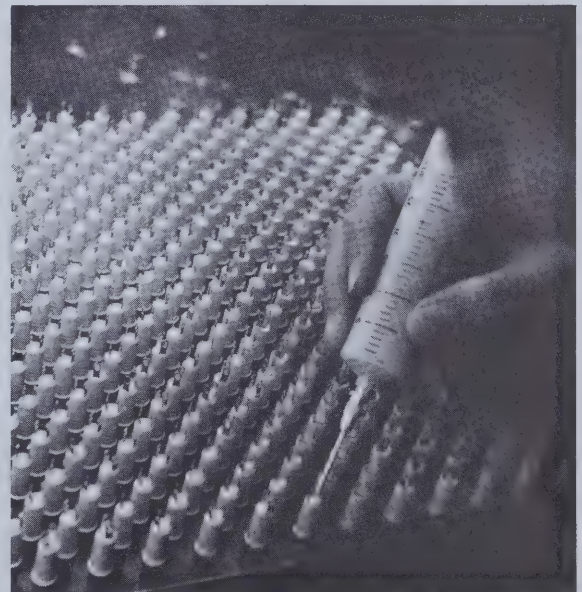
Marco's expansion program called for a new 40,000 square foot plant in Anaheim by mid-1971, which has been rescheduled for completion in 1972.



The first pushbutton switch to physically change color between on and off positions was introduced by Marco-Oak in 1970. Called "Rainbow", the switch meets applications in the computer, military and consumer industries.



As the Marco-Oak Rainbow switch is pushed from on to off positions, a reflecting prism at the sides of the switch cap effects a change in color bands, removing any doubt whether the switch is on or off.



Tiny Marco QT lights are assembled on square racks. Epoxy is then deposited around the terminals in an operation called "potting" which provides strength.



Architect's rendering of the proposed new Marco-Oak plant.



### DODGE SALES AT RECORD LEVELS

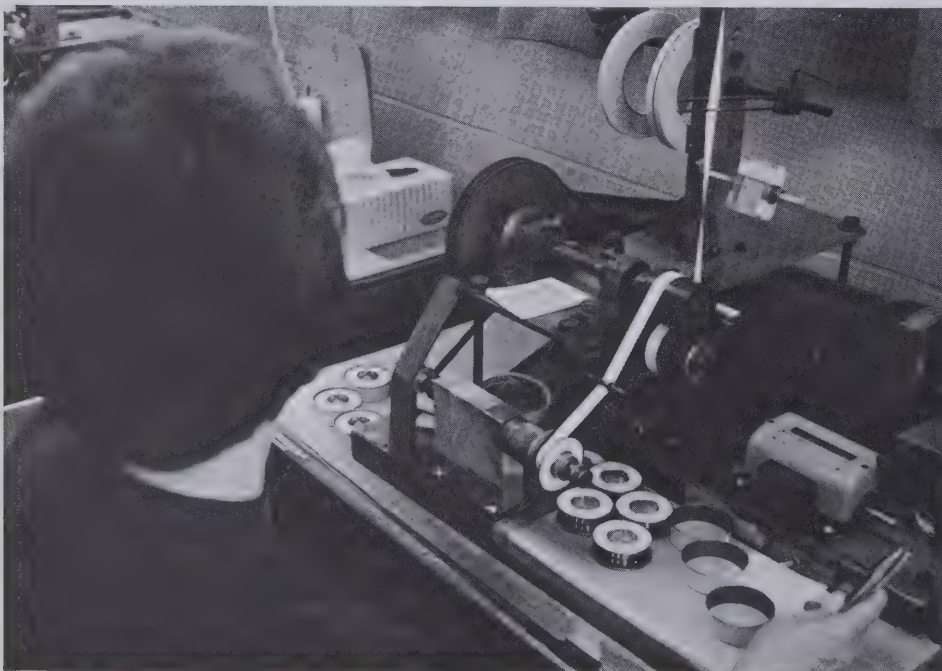
Dodge Industries reported record sales for the twelfth year in a row despite economic pressures and the General Motors strike which affected fourth quarter deliveries of flexible circuit materials for automotive electrical systems. Higher volume resulted from strong demand for multilayer and polyimide laminates for computers and related applications.

**Expansion Planned . . .** Expenditures for new machinery and equipment yielded results in terms of increased productivity and lower manufacturing costs. Dodge plans further major capital expenditures for additions to its facilities, particularly for tape and laminate production. The program includes establishment of clean room facilities at its Circuit Materials Division plant in Hoosick Falls, New York. This expanded capability will permit Dodge to serve an \$8 million market with high quality flexible circuit films and foils for computer and communications applications.

A significant portion of the 1971 appropriation is earmarked for the first phase of a two-year, \$500,000 program for production of materials formerly purchased from outside sources. Included in this program is a solvent tower which will permit a marked reduction in material costs. When the total program is completed, Dodge expects to realize production savings of more than \$200,000 annually.

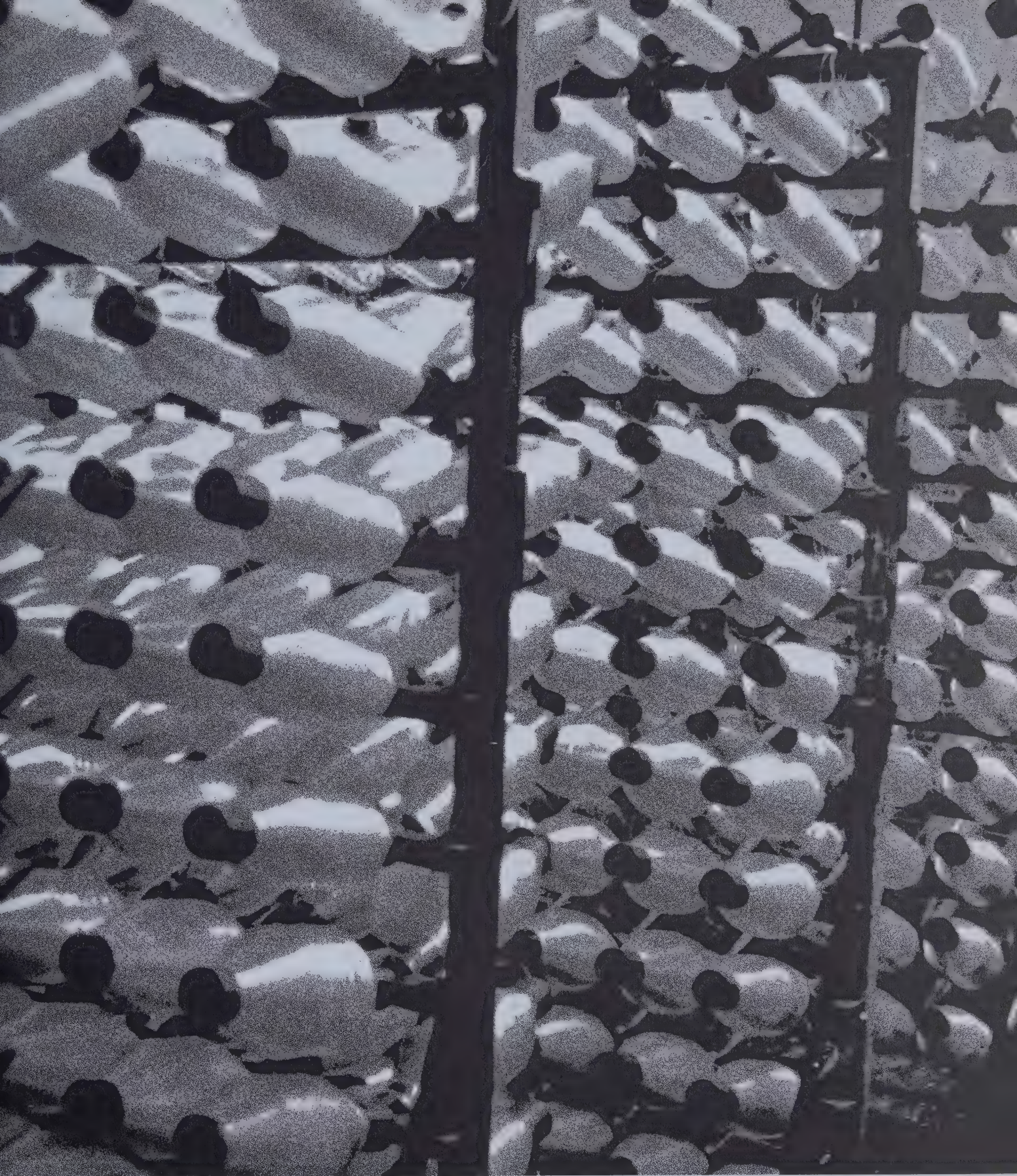


Mylar insulating film is laminated to copper foil which is used by many Dodge customers for etching printed circuit patterns.



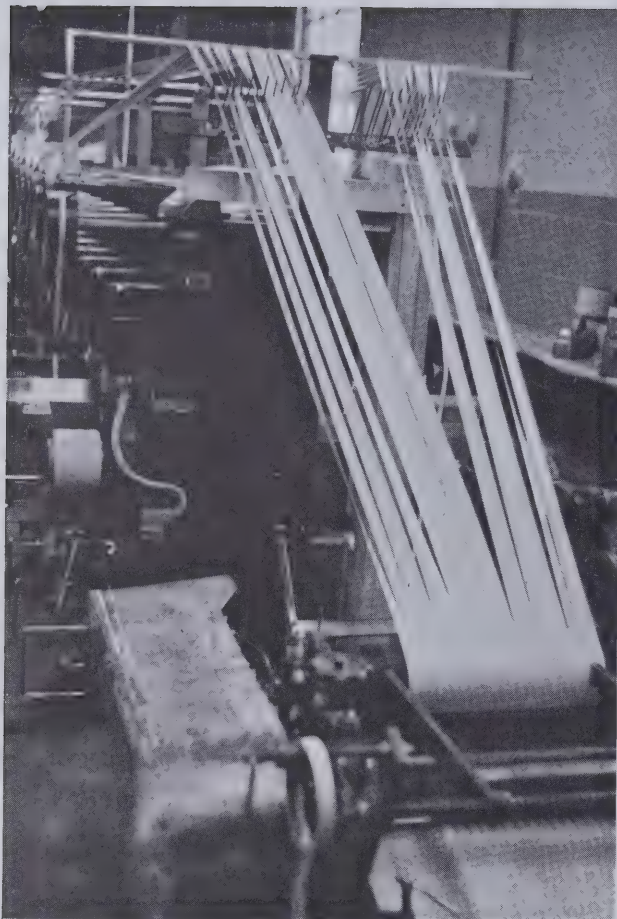
Dodge Thread Seal Tape is wound on spools to predetermined width and length specifications, in the Extruded Tape Winding Department. Hand winders are used for small lot quantities, while automatic winders handle larger orders.





Dodge PTFE coated yarn, noted for its non-stick, fire resistant properties, is wound on spools for packaging and shipment to customers for applications in the braiding industry, for space and fire fighting suits and industrial filter bags.





A tape slitter, which can process and package as many as 24 tapes at one time, slits and respools Dodge PTFE tape for both the wire and cable and consumer industries.

**Atlantic Laminates Broadens Lines** . . . Atlantic Laminates showed substantial sales gains, particularly for quality epoxy-glass electrical grade laminates for use in printed circuit applications. During the year, the company broadened its line to include polyimide-glass laminates and multi-layer boards of both epoxy-glass and polyimide.

**Dodge Outlook Good** . . . Growth potential for Dodge products, particularly coated PTFE tapes, sealing compounds, special laminates, foils and films, is encouraging both domestically and offshore. Surveys completed in 1970 indicate strong opportunities for PTFE foils and films as well as rigid and flexible laminates in European markets.

Key priority in 1971 will be to establish facilities in Europe either on a joint venture or wholly-owned subsidiary basis.

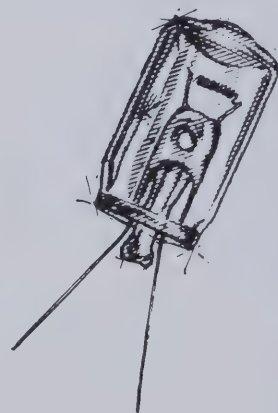
## LAMPS MOVES INTO NEW FIELDS

Los Angeles Miniature Products, Inc. increased penetration of the subminiature lamp market with units designed to meet new and growing segments of the industrial and medical electronics fields, offsetting lower sales to aircraft panel manufacturers.

The company noted increasing acceptance of its T-3/4 incandescent unit, which measures .093" x .187", by producers of numerical control and other readout equipment.

Orders were also received for its new T-4 lamp, designed specifically for medical diagnostic equipment manufacturers. Other versions of this unit have application in computers, fiberoptic devices, high intensity indicators and photo detector devices.

Early in 1971, the company introduced a subminiature lamp measuring only .2" x .7", offering unsurpassed circuit driving capability for photo detector applications in tape readers, encoder/decoders, scanners, card readers and fiberoptics.



A new high brightness lamp, the T-4, introduced by LAMPS in 1970, is especially suited for medical diagnostic equipment as well as fiberoptic devices and other applications requiring high intensity light.



**Cost Reductions . . .** LAMPS was also successful in implementing significant cost reductions during the year.

Most notable was the move from Gardena to Torrance. The new plant was the major phase of a \$440,000 capital improvement program which also included investments in automated equipment and machinery.

The benefits of a fully-integrated operation, featuring new equipment, improved processing techniques and a restructured Quality Control function, were felt almost immediately in terms of improved yields and greater production efficiencies.

**Customer Service Improved . . .** A "stocking" program, consisting of the more popular incandescent lamp designs, has resulted in better customer delivery and more economic utilization of automated production techniques.

#### TECHNO EXPANDS THICK FILM LINE

During the year, Techno-Components continued to broaden its line of potentiometers for industrial applications, with emphasis on microminiature thick film units.

Since Techno is the only manufacturer with a complete line of  $\frac{1}{4}$ " and  $\frac{3}{8}$ " wire wound trimmers which fully meet recently-established military reliability specifications, it withstood the full impact of defense spending cutbacks.

**Cost Reductions . . .** Techno initiated several cost reduction programs, including the plant consolidation and installation of semi-automated equipment to provide an annual factory cost reduction of approximately 5 per cent from 1970 levels.

Marketing emphasis in the 1970's will be on the industrial segment of the electronics industry, particularly among producers of electronic testing devices, oscillator and digital readout equipment, computers, automated machinery and encoding/decoding equipment.

#### MCCOY MOVES INTO NEW MARKETS

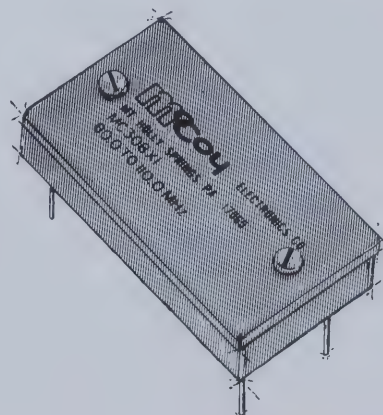
M<sup>c</sup>Coy Electronics Company successfully offset continuing weakness in the avionics and military markets by developing several new products for industrial and commercial application. As a result, 1970 volume was down only 4 per cent from 1969 levels. M<sup>c</sup>Coy developed customers and applications for its line of high frequency quartz crystals in such areas as medical monitoring, measuring and test equipment; telecopiers; pleasure boats and detection equipment.



A brilliant hydrogen-oxygen flame heats the bulb of a Quartz Halogen Lamp in a pinch seal operation at Los Angeles Miniature Products. Through the automatically cycled sealing operation, molten quartz is sealed around the lead-in strips of the lamp with a special mold.

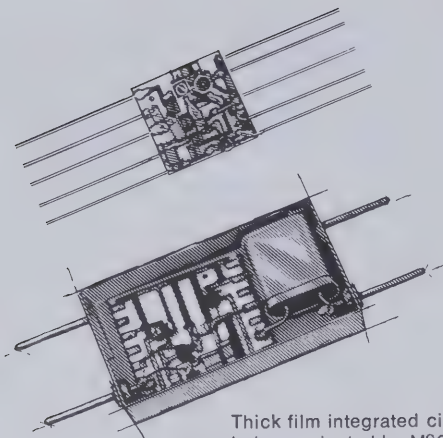


Automatic inspection of Techno potentiometers checks for such important characteristics as electrical adjustment, total resistance and continuity. Units not meeting any or all requirements are automatically ejected at any given point during the inspection.



Voltage controlled crystal oscillators produced by M<sup>c</sup>Coy provide a source for frequency modulation. This unit allows selection of any frequency in the 80 to 110 MHz range, simply by inserting a new TO-5 size crystal unit. Access is achieved by removing the two screws on the oscillator lid. The block-in crystal is then replaced with one of another frequency. Simple retuning process allows the user to tune the unit to his exact requirement, making this model ideal for use in communications equipment systems.





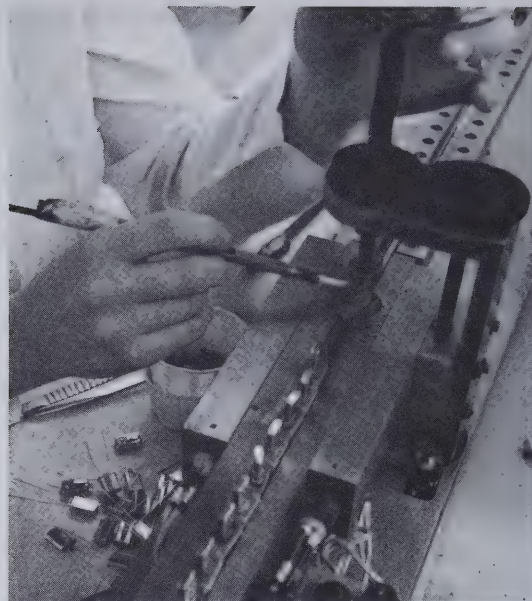
Thick film integrated circuits, being evaluated by M<sup>c</sup>Coy Electronics Company, require only one-third the surface area of earlier designs, while still providing the same functions. These circuits are being developed for use in M<sup>c</sup>Coy crystal controlled clock oscillators which provide the time base required by most computers.

In addition, combination quartz crystal and crystal filter and oscillator packages were designed and marketed for paging systems and computer installations.

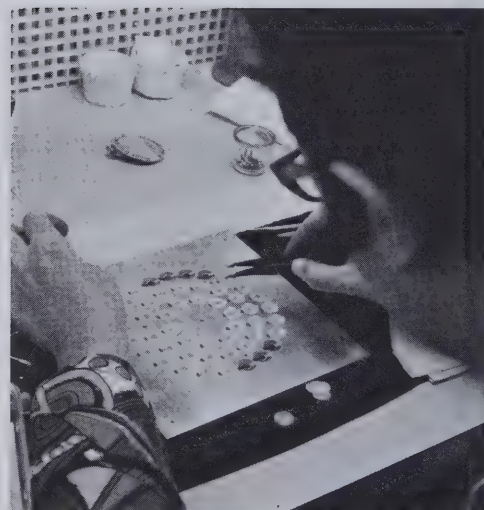
Near-term application opportunities for crystal filters and oscillators are available in a wide range of non-military, government-related controls and communications programs. They include auto and air traffic control systems; educational electronics; detection systems; medical electronics and CATV monitoring equipment.

**New Products . . .** Products introduced to capitalize on these opportunities were:

- A crystal oscillator permitting adjustment to any frequency in the 80 to 110 MHz range through plug-in insertion of an appropriate crystal. Prior to this development, separate oscillators were required for each frequency needed.
- Tiny (0.4" square) thick film integrated circuits for clock oscillators used in computers.
- A voltage controlled crystal oscillator to provide frequency modulation for detection systems.
- A delay equalizer (single sideband bandpass filter) capable of handling and controlling as many as 35,000 data tones or signals in a computer application.
- A high frequency (220 MHz) filter that eliminates adjacent channel interference and signal distortion for the land mobile communications market.
- Biolithic crystal filters for airborne and mobile communications applications where reliability, minimum weight and size are vital.



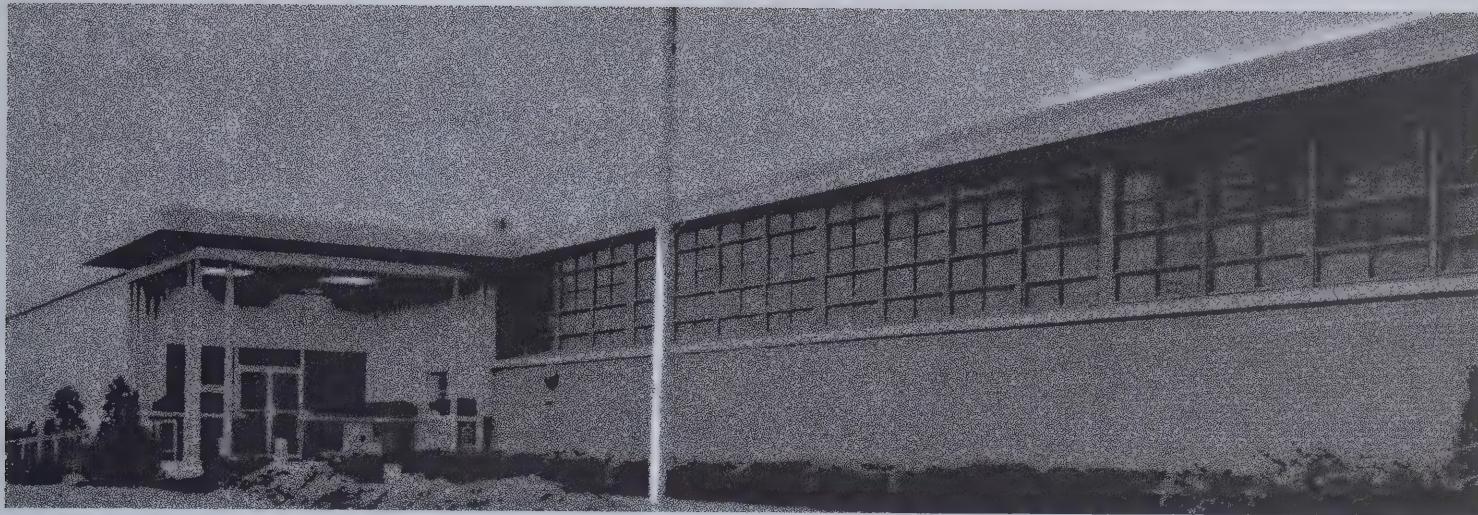
After plating, M<sup>c</sup>Coy crystals are inserted in headers containing special supports and bonded in place with non-gassing cements.



M<sup>c</sup>Coy oscillator crystal blanks are placed in special fixtures, called plating masks, prior to being vacuum coated in the typical key-hole pattern design of the plating mask.

**Cost Reductions . . .** Major cost reductions were achieved through the design and/or purchase of new automated equipment. Capital additions included slurry saws permitting better crystal blank yields and higher productivity; automatic lapping equipment and electronic vacuum plating equipment that plates as many as five materials in a single operation.





The Princeton, Illinois plant of Harper-Wyman Company, currently being enlarged to 138,000 square feet, is the company's principal production facility for its line of gas controls and components for the appliance industry.

## HARPER-WYMAN REVAMPS PRODUCT LINES

Harper-Wyman Company moved to offset sluggish gas appliance sales with the introduction of several engineering and manufacturing cost reduction programs. Major product lines are also being redesigned to lower material and production costs.

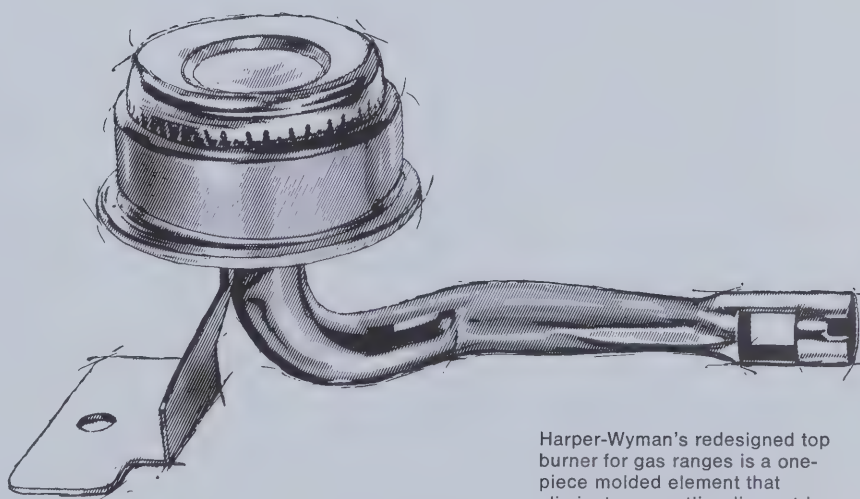
In conjunction with the redesign effort, the Harper-Wyman engineering group is moving toward standardization of valve designs which will permit maximum utilization of cost-saving automated indexing equipment.

The company successfully introduced newly-designed gas range top burners that eliminate a costly diecast base. The new burner system offers better performance at lower cost than competing units, permitting entry into the low-cost gas range market.

The consolidation of manufacturing operations in Princeton is estimated to save approximately \$400,000 annually. Major capital expenditures are budgeted for 1971 for both the building addition and new equipment related to product redesign and standardization programs.

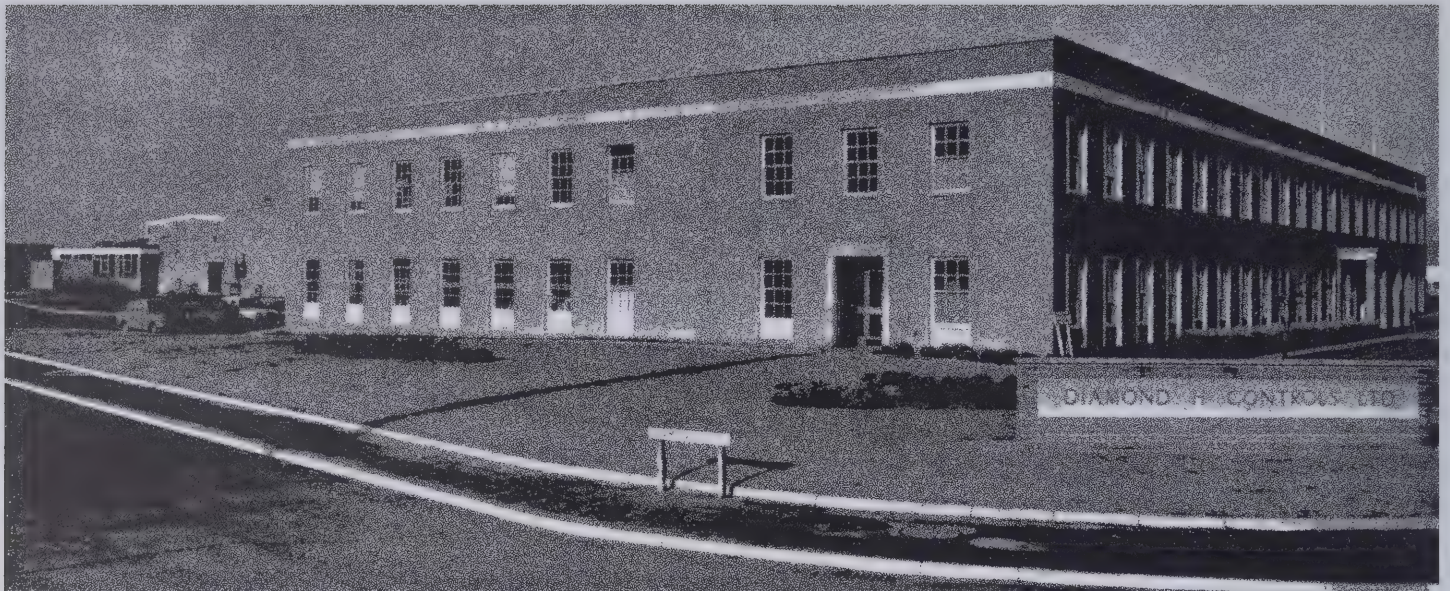
New product introductions planned for 1971 include an automatic control device to be offered under exclusive license from a French inventor. The unit, to be marketed under the Oxygard name, shuts off space heaters or gas appliances when the level of oxygen reaches a dangerously low level. It will solve a traditional problem with space and room heaters and will be proprietary to the U.S. market.

Industry sources estimate 1971 U.S. housing starts at between 1.7 and 1.8 million, compared with 1.4 million in 1970. This rebound, coupled with an increase in recreational appliance sales, indicates stronger volume for Harper-Wyman in 1971.



Harper-Wyman's redesigned top burner for gas ranges is a one-piece molded element that eliminates a costlier die-cast base.





Headquarters for Diamond H Controls Ltd. in Norwich, England. During 1970, all relay assembly operations were consolidated into the 105,000 square foot facility.

#### **O/E/N INTERNATIONAL SALES HIGHER**

Offshore operations turned in generally strong performances in 1970, accounting for 17 per cent of consolidated sales, compared with 16 per cent in 1969.

#### **ENGLISH SUBSIDIARY REACHES NEW VOLUME PEAK**

In England, Diamond H Controls Ltd. recorded its ninth consecutive year of record sales and earnings aided by strong thermostat and infinite control sales to a buoyant electric cooking range market.

The company also experienced higher sales of electronic controllers and Oak-type Rotary and Pushbutton switches.

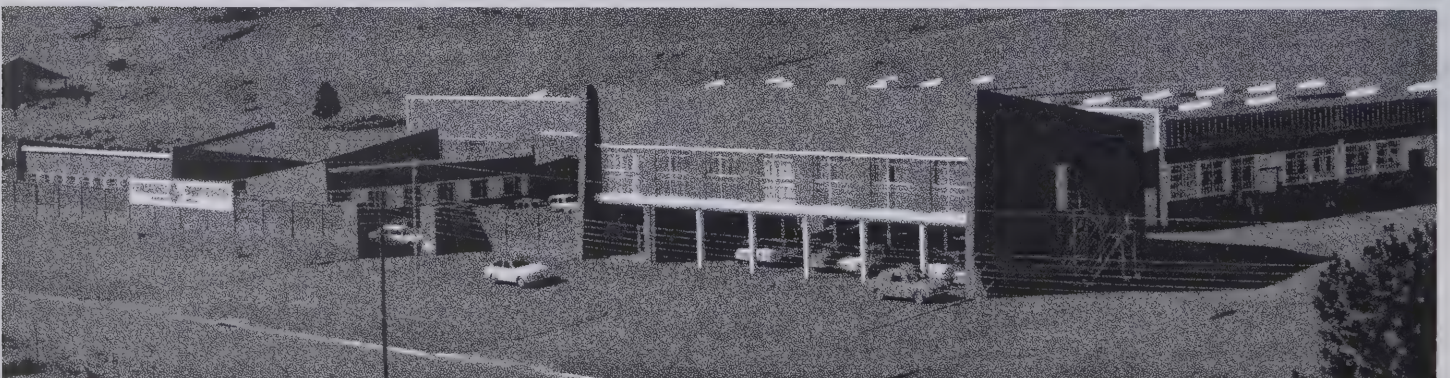
The company consolidated electromagnetic and electromechanical assembly operations with the transfer of relay production from leased facilities to its 105,000 square foot plant in Norwich.

Timing of the move was propitious because of lower relay demand caused by setbacks suffered by the vending machine industry in 1969, which left Diamond H customers with excessive stocks of components, including relays.

**Cost Reductions . . .** Lower cost designs, coupled with moderate price increases, particularly in infinite controls and thermostats, enabled Diamond H Controls to maintain its profit margins despite sharply increased inflationary costs.

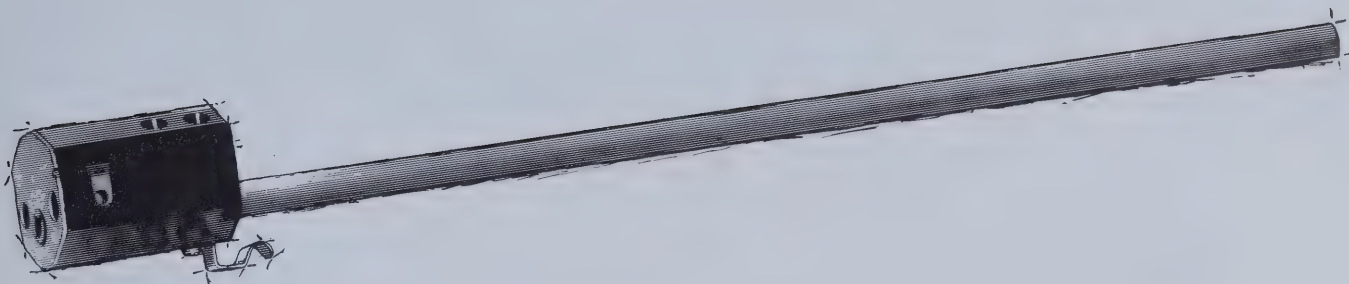
**New Products . . .** Diamond H Controls began to produce quartz crystal filters of its own design and established an independent Crystal Products Division. Operations will include filter production and fabrication of quartz crystals.

In 1971, the company plans to introduce Oak-type rotary switches with printed circuit sections of both Oak proprietary and Diamond H custom design.



Diamond H Switches supplies the growing South African electrical and electronics markets with appliance controls, switches and relays from its 2½ year old, 38,000 square foot facility in Pietermaritzburg.





## HARPER-WYMAN INTERNATIONAL SHOWS GAINS

The economies of Mexico and Venezuela continued buoyant, and Harper-Wyman subsidiaries in Mexico City and Caracas reported sales gains in 1970. These subsidiaries produce essentially the same type of components for their domestic appliance industries as does the parent company in the U.S.

In addition, they also produce a complementary line of control devices for LP gas equipment under license from the Rego Division of Golconda Corp.

## HOLLAND OPERATIONS AT RECORD LEVELS

Oak Electro/netics Holland N.V. recorded its best performance since its acquisition in 1965.

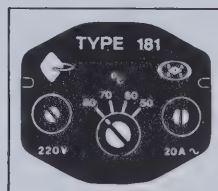
Among outstanding achievements were a substantial increase in sales of rotary switch products; successful transition from independent to direct sales representatives in Switzerland and Denmark; ability, both in terms of production and quality control, to handle the larger volume and wider range of product lines being sold to the European market.

The outlook for 1971 is exceptionally strong and will include expansion of the Marco-Oak line of Presslite Switches; introduction of Oak Multidex Rotary Switches, and expansion of product testing capabilities in accordance with European quality requirements.

## INDIA EXPANDED

O/E/N India Limited added 13,000 square feet to the 20,000 square foot facility constructed in 1969 near Cochin in Southern India.

The expansion was made to accommodate plating, molding, screw machine and punch press equipment as part of the program to make O/E/N India a fully integrated producer of rotary switches and industrial relays for use in communications systems, data processing equipment and appliances.



During 1970, Diamond H Switches introduced a water heater control to the South African appliance control market. As shown on the face of the product, the Type 181 control can be preset to maintain constant water temperature.

O/E/N India added assembly equipment for new products, particularly the Half Inch and Multidex Switches of Oak design, and industrial relays designed by O/E/N's Hart-Advance Relay Division. In addition, government permission has been requested to produce television tuners, wire wound potentiometers and adhesive-coated copper foils . . . products of proven and accepted design of other O/E/N domestic subsidiaries and divisions.

The operation was formed as a joint venture between O/E/N, the Kerala State Industrial Development Corporation and Geomaths, a private Indian firm.

## SOUTH AFRICA COMPANY DIVERSIFIES

Diamond H Switches, the leading supplier of components to the South African electrical controls industry, continued diversification into the electronics and industrial control industries.

The company successfully introduced low power rotary switches, designed by the Oak Switch Division in the U.S., as well as relays meeting design requirements of South African manufacturers. It also began to produce and market transformers, coils, resistors and electrical control gear for the industrial electronics market.

Diamond H Switches maintained its dominant position in the appliance components industry. Early in 1970, it introduced a water heater control and low-cost thermostat for electric cooking ranges.





## CONSOLIDATED

## ASSETS

|   | 1970                | 1969                |
|---|---------------------|---------------------|
| <b>CURRENT ASSETS:</b>  |                     |                     |
| Cash .....  | \$ 2,062,298        | \$ 2,270,689        |
| Receivables, less reserve of \$335,000 in 1970 and \$342,000 in 1969..... | 12,589,643          | 13,524,821          |
| Refundable Federal income taxes .....                                     | 600,000             | —                   |
| Inventories, at the lower of first-in, first-out cost or market.....      | 19,042,182          | 22,092,699          |
| Total current assets.....   | <u>\$34,294,123</u> | <u>\$37,888,209</u> |
| <br><b>PLANT AND EQUIPMENT, at cost (Note 6):</b>                         |                     |                     |
| Land .....  | \$ 1,214,498        | \$ 1,345,280        |
| Buildings .....   | 11,231,983          | 12,102,049          |
| Machinery and equipment.....  | 19,258,980          | 17,900,108          |
|   | <u>\$31,705,461</u> | <u>\$31,347,437</u> |
| Less-Accumulated depreciation .....                                       | <u>15,576,628</u>   | <u>14,134,970</u>   |
|   | <u>\$16,128,833</u> | <u>\$17,212,467</u> |
| <br><b>OTHER ASSETS:</b>  |                     |                     |
| Notes receivable, prepaid insurance, interest, etc.....                   | \$ 1,977,615        | \$ 1,101,166        |
| Investments in affiliated companies (Note 1).....                         | 450,995             | 256,125             |
| Patents and debenture expense, less amortization (Note 2).....            | 268,870             | 282,296             |
|   | <u>\$ 2,697,480</u> | <u>\$ 1,639,587</u> |
|   | <u>\$53,120,436</u> | <u>\$56,740,263</u> |

## Notes to Consolidated Financial Statements

## (1) Principles of Consolidation:

The consolidated financial statements include the accounts of the Company and all of its subsidiaries. The accounts of foreign subsidiaries have been included in the consolidated financial statements on the basis of the official rates of exchange except plant and equipment, capital stock and surplus which have been converted at historical rates, where applicable. It is the Company's policy to provide for deferred Federal income taxes which will be payable upon the subsequent distribution of the earnings of certain foreign subsidiaries. The investments in affiliated companies have been adjusted to underlying book value at December 31, 1970, and their net income is included in the consolidated statements of income.

## (2) Long-Term Debt:

The 4<sup>3</sup>/<sub>8</sub>% subordinated convertible debentures are due \$1,000,000 annually commencing March 1, 1978. The debentures are convertible at any time prior to maturity, unless previously redeemed, into common stock of the Company. The current conversion price is \$34.67 per share and subject to adjustment in certain events.

The 5% note payable is due \$400,000 annually through 1983 and \$500,000 in 1984.

The debt agreements provide certain restrictions upon the

payment of cash dividends and the purchase or redemption of any class of stock. At December 31, 1970, \$7,270,000 of consolidated retained earnings was not subject to these restrictions.

## (3) Cumulative Convertible Preferred Stock:

Dividends on the preferred stock are cumulative at \$4.375 per share. Preferred shares are callable at \$100 per share at the option of the Company any time subsequent to June 30, 1972. Based upon shares outstanding at December 31, 1970, the total call price would be \$8,033,900. The 80,339 shares of preferred stock are convertible into 185,200 shares of common stock. Each share of preferred stock is entitled to 1/2 vote. During 1970, 77 shares of common stock were issued in connection with the conversion of 35 preferred shares.

## (4) Stock Reservations:

Under stock option plans, 88,312 shares of the Company's common stock are reserved for issuance to officers and key employees. During 1970 options to purchase 14,575 shares at \$11.75 per share were granted; options to purchase 350 shares at \$11.27 per share were exercised and options to purchase 19,132 shares expired.

As of December 31, 1970, options to purchase 75,537 shares at prices ranging from \$11.40 to \$34.125 per share were outstanding.

As of December 31, 1970, 473,634 shares of authorized and unissued common stock were reserved for issuance on conversion



# BALANCE SHEETS

## LIABILITIES

December 31, 1970 and 1969

|   | 1970                | 1969                |
|---|---------------------|---------------------|
| <b>CURRENT LIABILITIES:</b>   |                     |                     |
| Notes payable to banks.....   | \$ 3,847,561        | \$ 4,311,620        |
| Current portion of long-term debt.....  | 1,123,851           | 748,076             |
| Accounts payable and accrued expenses.....  | 6,731,481           | 7,037,846           |
| Accrued income taxes.....   | 66,332              | 891,536             |
| Total current liabilities.....  | <u>\$11,769,225</u> | <u>\$12,989,078</u> |
| <b>OTHER LIABILITIES:</b>   |                     |                     |
| Deferred income taxes (Note 5).....   | \$ 67,000           | \$ 95,000           |
| Accrued pensions and deferred compensation (Note 5).....  | 1,302,535           | 1,236,615           |
| Minority interest in consolidated subsidiaries.....   | 456,194             | 444,080             |
|   | <u>\$ 1,825,729</u> | <u>\$ 1,775,695</u> |
| <b>LONG-TERM DEBT, less amounts due within one year:</b>  |                     |                     |
| 4 <sup>3</sup> / <sub>8</sub> % subordinated convertible debentures (Note 2).....   | \$10,000,000        | \$10,000,000        |
| 5% note payable (Note 2).....   | 5,300,000           | 5,700,000           |
| Notes payable of subsidiaries, payable in<br>variable annual amounts to 1986.....   | 702,928             | 1,428,399           |
|   | <u>\$16,002,928</u> | <u>\$17,128,399</u> |
| <b>STOCKHOLDERS' INVESTMENT (Notes 2, 3, and 4):</b>  |                     |                     |
| Cumulative convertible preferred stock, \$5 stated value, authorized<br>400,000 shares, issued 80,339 shares in 1970 and 80,374 shares in 1969<br>(liquidating preference \$8,033,900 in 1970)..... | \$ 401,695          | \$ 401,870          |
| Common stock, \$1 par value, authorized 4,000,000 shares,<br>issued 1,681,465 shares in 1970 and 1,681,038 shares in 1969.....  | 1,681,465           | 1,681,038           |
| Paid-in surplus.....  | 1,971,792           | 1,924,373           |
| Retained earnings.....  | 19,597,481          | 20,921,805          |
| Less—Treasury stock, at cost (44,550 shares in 1970 and 3,700 in 1969).....   | (129,879)           | (81,995)            |
|   | <u>\$23,522,554</u> | <u>\$24,847,091</u> |
|   | <u>\$53,120,436</u> | <u>\$56,740,263</u> |

of the 4<sup>3</sup>/<sub>8</sub>% subordinated convertible debentures and the convertible preferred stock.

### (5) Accrued Pensions and Deferred Compensation:

The Company has a pension plan which covers substantially all salaried employees. Obligations under the plan are funded on a level cost basis using a group annuity contract with an insurance company. During 1970 the Company provided \$295,941 for the plan. The Company's subsidiary, Harper-Wyman Company, has a pension plan which provides for retirement benefits to substantially all of its employees. During 1970 Harper-Wyman provided \$126,000 for the plan which includes normal costs and interest on past service costs; however, no payments have been made to the fund for the years 1966 through 1969. Certain other subsidiaries have retirement plans and during 1970 \$143,666 was provided for these plans. The total value of fund assets exceeded the actuarially computed value of vested benefits for all plans as of December 31, 1970. Accrued pensions and deferred compensation at December 31, 1969 has been restated to include \$493,207 of deferred compensation previously classified in accounts payable and accrued expenses. There was no provision for deferred compensation in 1970. Deferred income taxes at December 31, 1969 have also been restated as a result of this reclassification.

### (6) Property, Plant and Equipment:

Depreciation on buildings is generally provided on the straight-

line method for accounting purposes and at certain locations, depreciation is provided on the declining-balance method for income tax purposes. Depreciation of all other property is provided over the estimated useful lives principally on accelerated methods for accounting purposes. The use of the declining-balance method for tax purposes has resulted in a tax deferral which is included in deferred income taxes.

### (7) Net Income (Loss) per Share of Common Stock:

Net income (\$.74 in 1969) and loss (\$.49 in 1970) per share of common stock is based upon the average number of common shares outstanding during each year, after recognition of a full year's dividend requirements on the preferred shares. In computing net income per share for 1969, average common shares outstanding exclude 40,000 shares which were previously held in escrow. These shares were to be issued if Harper-Wyman Company attained a specified net income for the year ended December 31, 1969. Since Harper-Wyman earned less than the specified amount in 1969, these shares were returned to the Company in 1970 and are included in treasury stock.

There would be no increase in net loss per share for 1970 if the 4<sup>3</sup>/<sub>8</sub>% subordinated convertible debentures, the \$4.375 convertible preferred shares and the stock options were converted into common shares at the conversion ratios in effect at December 31, 1970.





**CONSOLIDATED STATEMENTS OF INCOME FOR  
THE YEARS ENDED DECEMBER 31, 1970 AND 1969**

|  | 1970                       | 1969                       |
|--|----------------------------|----------------------------|
| NET SALES .....  | \$75,056,484               | \$85,629,695               |
| COST OF SALES .....  | <u>59,664,293</u>          | <u>65,953,905</u>          |
| Gross income .....   | \$15,392,191               | \$19,675,790               |
| SELLING, ENGINEERING AND ADMINISTRATIVE EXPENSES.....  | <u>15,666,830</u>          | <u>15,874,951</u>          |
| Income (loss) from operations.....   | <u>\$ (274,639)</u>        | <u>\$ 3,800,839</u>        |
| OTHER INCOME (EXPENSE), net:   |                            |                            |
| Interest expense .....   | \$ (1,127,793)             | \$ (1,194,130)             |
| Miscellaneous, net .....   | <u>398,583</u>             | <u>375,581</u>             |
|  | <u>\$ (729,210)</u>        | <u>\$ (818,549)</u>        |
| Income (loss) before income taxes and extraordinary item.....  | \$ (1,003,849)             | \$ 2,982,290               |
| PROVISION (REDUCTION) FOR INCOME TAXES.....  | <u>(555,000)</u>           | <u>1,556,000</u>           |
| Income (loss) before extraordinary item.....   | <u>\$ (448,849)</u>        | <u>\$ 1,426,290</u>        |
| EXTRAORDINARY ITEM, gain on sale of investment in affiliated company,<br>net of applicable income tax of \$95,000..... | <u>—</u>                   | <u>132,345</u>             |
| Net income (loss).....   | <u><u>\$ (448,849)</u></u> | <u><u>\$ 1,558,635</u></u> |
| NET INCOME (LOSS) PER COMMON SHARE (Note 7):   |                            |                            |
| Before extraordinary item.....   | \$ (.49)                   | \$ .66                     |
| Extraordinary item .....   | <u>—</u>                   | <u>.08</u>                 |
| Net income (loss).....   | <u><u>\$ (.49)</u></u>     | <u><u>\$ .74</u></u>       |

**CONSOLIDATED STATEMENTS OF SOURCE AND APPLICATION OF FUNDS  
FOR THE YEARS ENDED DECEMBER 31, 1970 AND 1969**

| SOURCE:   | 1970               | 1969               | APPLICATION:   | 1970                      | 1969                      |
|---|--------------------|--------------------|--|---------------------------|---------------------------|
| Net income (loss) .....   | \$ (448,849)       | \$1,558,635        | Additions to plant<br>and equipment .....                          | \$3,227,535               | \$3,254,809               |
| Depreciation and amortization... 2,850,900  | 2,850,900          | 2,936,724          | Cash dividends:  |                           |                           |
| Increase (decrease) in minority in-<br>terest in consolidated subsidiaries 12,114                 | 12,114             | (192,572)          | Common .....   | 523,915                   | 969,962                   |
| Proceeds from exercise of<br>stock options .....  | 3,945              | 25,455             | Preferred .....  | 351,560                   | 352,547                   |
| Sales (at approximate net book<br>value) and retirements of plant<br>and equipment..... 1,497,276 | 1,497,276          | 319,341            | Reduction of long-term debt.....                                   | 1,125,471                 | 745,116                   |
| Decrease in working capital..... 2,374,233  | 2,374,233          | 844,211            | Increase (decrease) in investments<br>in affiliated companies..... | 194,870                   | (363,175)                 |
|   | <u>\$6,289,619</u> | <u>\$5,491,794</u> | Other items, net .....   | <u>866,268</u>            | <u>532,535</u>            |
|   |                    |                    |  | <u><u>\$6,289,619</u></u> | <u><u>\$5,491,794</u></u> |



**CONSOLIDATED STATEMENTS OF PAID-IN SURPLUS AND RETAINED EARNINGS  
FOR THE YEARS ENDED DECEMBER 31, 1970 AND 1969**

|   | 1970                | 1969                |
|---|---------------------|---------------------|
| PAID-IN SURPLUS   |                     |                     |
| BALANCE, BEGINNING OF YEAR.....   | \$ 1,924,373        | \$ 1,900,168        |
| ADD:  |                     |                     |
| Return of common shares from escrow (Note 7).....                                 | 40,000              | —                   |
| Excess of option price over par value of previously<br>unissued common stock..... | 3,595               | 23,205              |
| Miscellaneous items, net.....   | 3,824               | 1,000               |
| BALANCE, END OF YEAR.....   | <u>\$ 1,971,792</u> | <u>\$ 1,924,373</u> |
| RETAINED EARNINGS   |                     |                     |
| BALANCE, BEGINNING OF YEAR.....   | \$20,921,805        | \$20,704,688        |
| ADD (DEDUCT):   |                     |                     |
| Net income (loss) for the year.....   | (448,849)           | 1,558,635           |
| Cash dividends:   |                     |                     |
| Common (\$.32 per share in 1970 and \$.64 in 1969).....                           | (523,915)           | (969,962)           |
| Preferred (\$4.375 per share).....  | (351,560)           | (352,547)           |
| Dividends of acquired company prior to pooling-of-interests.....                  | —                   | ( 19,009)           |
| BALANCE, END OF YEAR (Note 2).....  | <u>\$19,597,481</u> | <u>\$20,921,805</u> |

**To the Stockholders and the  
Board of Directors  
OAK ELECTRO/NETICS CORP.**

We have examined the consolidated balance sheets of OAK ELECTRO/NETICS CORP. (a Delaware corporation) and subsidiaries as of December 31, 1970 and 1969, and the related consolidated statements of income, paid-in surplus and retained earnings, and funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying consolidated balance sheets and consolidated statements of income,

paid-in surplus and retained earnings, and funds present fairly the financial position of OAK ELECTRO/NETICS CORP. and subsidiaries as of December 31, 1970 and 1969, and the results of their operations and the source and application of funds for the years then ended, in conformity with generally accepted accounting principles consistently applied during the years.

**ARTHUR ANDERSEN & CO.**

Chicago, Illinois  
February 19, 1971



# OAK ELECTRO/NETICS CORP *and subsidiaries*

|   | 1970   | 1969  | 1968  |
|---|--|---|---|
| <b>OPERATIONAL RESULTS</b>                          |  |   |   |
| Net Sales .....                                     | \$75,056,484   | \$85,629,695  | \$90,016,440  |
| Income Taxes .....                                  | (555,000)  | 1,651,000   | 1,746,000   |
| Net Income .....                                    | (448,849)  | 1,558,635   | 1,481,934   |
| Net Income per Common Share (1) .....               | (\$ .49)   | \$ .74  | \$ .69  |
| Cash Dividends—Common .....                         | \$ 523,915   | \$ 969,962  | \$ 727,581  |
| Cash Dividends per Common Share .....               | \$ .32   | \$ .64  | \$ .64  |
| <b>FINANCIAL POSITION</b>                           |  |   |   |
| Current Assets .....                                | \$34,294,123   | \$37,888,209  | \$38,063,074  |
| Current Liabilities .....                           | 11,769,225   | 12,989,078  | 12,903,323  |
| Current Ratio .....                                 | 2.9  | 2.9   | 2.9   |
| Working Capital .....                               | \$22,524,898   | \$24,899,131  | \$25,159,751  |
| Property, Plant and Equipment (Net) .....           | 16,128,833   | 17,212,467  | 17,171,792  |
| Total Assets .....                                  | 53,120,436   | 56,740,263  | 56,975,880  |
| Long-Term Debt .....                                | 16,002,928   | 17,128,399  | 17,873,515  |
| Earnings Reinvested in the Business .....           | (1,324,324)  | 217,117   | 380,893   |
| Shareholders' Investment .....                      | 23,522,554   | 24,847,091  | 24,617,626  |
| <b>GENERAL STATISTICS</b>                           |  |   |   |
| Return on Shareholders' Investment—Beginning .....  | (1.81%)  | 6.33%   | 6.12%   |
| Capital Expenditures (Excluding acquisitions) ..... | \$ 3,227,535   | \$ 3,254,809  | \$ 3,198,944  |
| Depreciation and Amortization .....                 | 2,850,900  | 2,936,724   | 2,983,735   |
| Cash Flow from Operations .....                     | 2,402,051  | 4,495,359   | 4,465,669   |
| Cash Flow per Common Share .....                    | \$1.47   | \$2.75  | \$2.73  |
| Common Shares Outstanding—Average .....             | 1,637,204  | 1,636,253   | 1,633,735   |
| Number of Shareholders .....                        | 5,335  | 5,104   | 4,494   |
| Number of Employees .....                           | 6,512  | 7,312   | 8,998   |
| Salaries and Wages .....                            | \$28,271,524   | \$30,820,496  | \$34,081,799  |
| Common Stock Price Range .....                      | 13 <sup>5</sup> / <sub>8</sub> - 5 <sup>1</sup> / <sub>2</sub> | 29 <sup>1</sup> / <sub>2</sub> - 10 <sup>3</sup> / <sub>8</sub> | 38 <sup>7</sup> / <sub>8</sub> - 22 <sup>3</sup> / <sub>4</sub> |

(1) After retroactive reflection of dividends on Preferred Shares issued for acquisitions which are treated as poolings of interests.  
Where applicable and significant, figures reflect poolings-of-interests treatments of acquired companies.

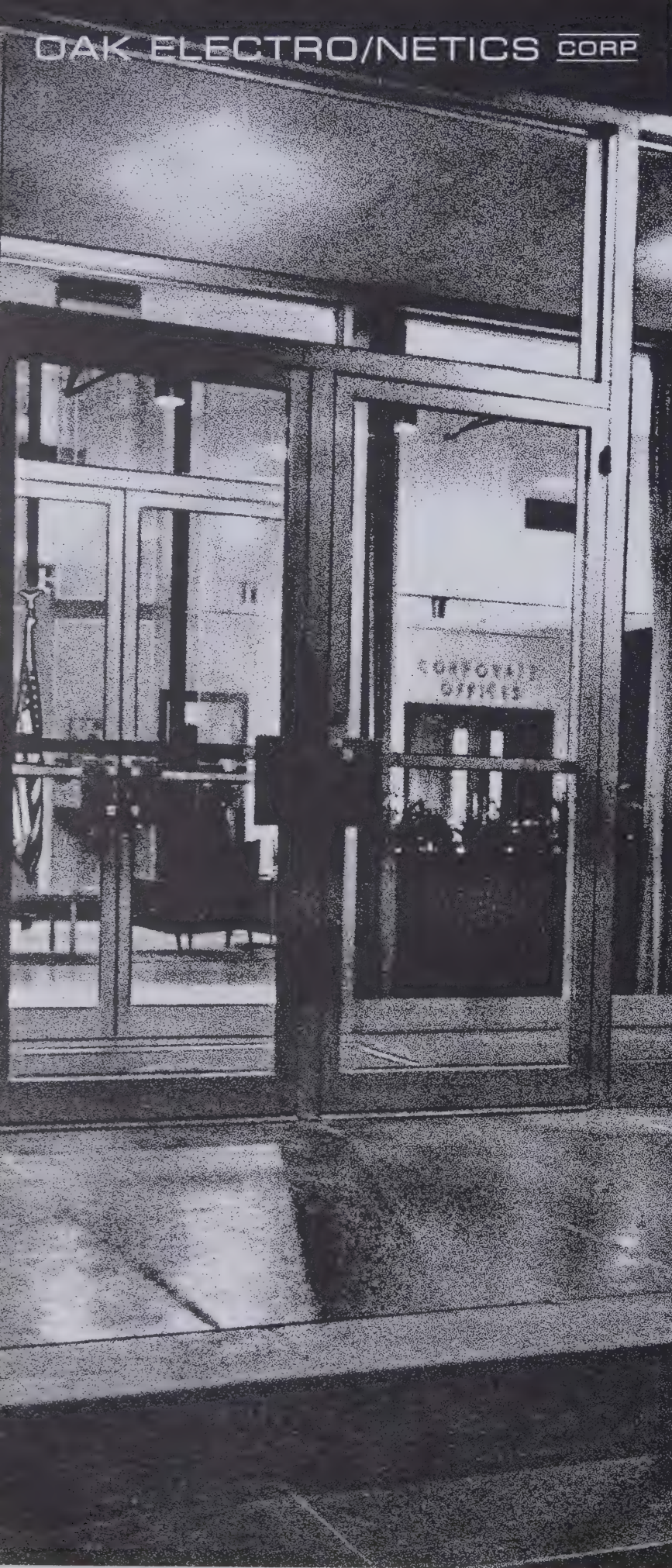


# TEN YEAR STATISTICAL REVIEW

| 1967         | 1966         | 1965         | 1964         | 1963         | 1962         | 1961         |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| \$92,301,256 | \$88,011,587 | \$73,532,346 | \$63,696,801 | \$51,576,562 | \$40,459,386 | \$31,592,605 |
| 2,145,000    | 2,986,800    | 2,337,791    | 2,127,106    | 1,633,790    | 933,643      | 795,881      |
| 2,321,998    | 3,031,245    | 2,607,347    | 2,087,582    | 1,102,776    | 969,049      | 719,667      |
| \$1.26       | \$1.72       | \$1.49       | \$1.15       | \$ .51       | \$ .43       | \$ .27       |
| \$ / 684,144 | \$ 530,497   | \$ 371,047   | \$ 269,705   | \$ 205,201   | \$ 68,706    | \$ 65,579    |
| \$ .64       | \$ .51       | \$ .36       | \$ .26       | \$ .20       | \$ .07       | \$ .07       |
| \$36,667,992 | \$36,933,319 | \$24,300,288 | \$19,647,416 | \$15,916,364 | \$13,872,023 | \$ 9,951,081 |
| 11,171,599   | 21,841,784   | 11,163,620   | 7,522,912    | 7,203,931    | 5,738,924    | 3,303,153    |
| 3.3          | 1.7          | 2.2          | 2.6          | 2.2          | 2.4          | 3.0          |
| \$25,496,393 | \$15,091,535 | \$13,136,668 | \$12,124,504 | \$ 8,712,433 | \$ 8,133,099 | \$ 6,647,928 |
| 16,589,598   | 15,595,624   | 13,695,736   | 11,945,772   | 10,788,540   | 9,284,208    | 6,873,502    |
| 54,879,653   | 53,767,987   | 38,826,901   | 32,513,972   | 27,701,617   | 24,137,265   | 17,355,133   |
| 18,477,289   | 8,398,046    | 7,124,605    | 6,777,202    | 4,296,230    | 3,061,747    | 225,570      |
| 1,477,844    | 2,442,748    | 2,112,710    | 1,735,173    | 956,408      | 842,343      | 591,288      |
| 23,860,437   | 22,145,459   | 19,420,683   | 17,278,677   | 15,548,825   | 14,853,858   | 13,473,059   |
| 10.49%       | 15.61%       | 15.09%       | 13.43%       | 8.25%        | 7.19%        | 5.65%        |
| \$ 3,587,275 | \$ 4,324,787 | \$ 2,729,990 | \$ 3,084,742 | \$ 2,586,108 | \$ 1,421,139 | \$ 1,642,795 |
| 2,636,373    | 2,455,457    | 2,093,473    | 1,803,241    | 1,519,212    | 1,259,168    | 941,141      |
| 4,958,371    | 5,486,702    | 4,700,820    | 3,890,823    | 2,745,188    | 2,228,217    | 1,660,808    |
| \$3.16       | \$3.53       | \$3.05       | \$2.53       | \$1.77       | \$1.45       | \$1.10       |
| 1,567,747    | 1,555,755    | 1,539,695    | 1,538,683    | 1,548,433    | 1,534,423    | 1,504,963    |
| 4,385        | 4,131        | 3,981        | 3,923        | 3,848        | 4,008        | 3,965        |
| 8,315        | 9,492        | 7,812        | 6,958        | 5,152        | 4,729        | 3,420        |
| \$33,398,262 | \$32,039,791 | \$26,460,267 | \$24,404,807 | \$19,518,581 | \$15,648,483 | \$12,604,299 |
| 48¾-187⁄8    | 30¾-17       | 207⁄8-103⁄8  | 141⁄8-91⁄2   | 117⁄8-83⁄8   | 131⁄8-81⁄8   | 121⁄8-93⁄8   |

Where applicable, common share data adjusted to reflect 50% stock distribution made on August 12, 1966.





## *Company or Division*

**Oak Switch Division**

**Hart Indiana**

**Win-West Plastics**

**Hart-Advance Relay Division**

**Selectronics Division**

**M<sup>c</sup>Coy Electronics Company**

**Dodge Industries, Inc.**

**Circuit Materials Division**

**Engineered Yarns, Inc.**

**Atlantic Laminates Division**

**Marco-Oak Industries, Inc.**

**Techno-Components Corp.**

**LAMPS, Inc.**

**Harper-Wyman Company**

**O/E/N Canada Ltd.**

**Harper-Wyman de Mexico, S.A. de C.V.**

**Harper-Wyman de Venezuela, S.A. de C.V.**

**Diamond H Controls Ltd.**

**Diamond H Switches (S.A.) Pty., Ltd.**

**Harper-Wyman Limited**

**Oak Electro/netics Holland N.V.**

**O/E/N India Limited**

**Oak Electro/netics Corp. (Hong Kong) Ltd.**

**Oak Electro/netics Corp. (Japan) Ltd.**

## *Sales Offices*

**O/E/N California**

**O/E/N Florida**

**O/E/N Minnesota**



# Operating Organization

| Location  | Products  | Applications  |
|---|---|---|
| Crystal Lake, Illinois                          | Rotary, Pushbutton, Lighted Pushbutton and Keyboard Switches/Stepping Switches and Rotary Solenoids/Appliance Switches/Vibrators  | Industrial Controls/Data Processing and Peripheral Equipment/Communications Systems/Military Equipment/Medical and Laboratory Equipment/Appliances  |
| Mishawaka, Indiana                              | Toolmaking/Diemaking/Fabricating Operations   | Automotive Industry/Appliance Controls/TV Industry/Home Entertainment Field/Industrial Controls/Military Equipment  |
| Wauconda, Illinois                              | Custom Molded Precision Plastic Materials of Thermoplastic and Thermosetting Resins   | Various Electronic and Electrical Equipment   |
| Elkhorn, Wisconsin                              | Military, Industrial and Commercial Relays/Solid State Time Delay and Hybrid Voltage Sensing Devices/Linear Solenoids   | Communications Equipment/Data Processing Equipment/Aircraft and Missile Guidance Control/Industrial Machine Control/Welding Apparatus/Automated Equipment/Copy Machines   |
| Crystal Lake, Illinois                          | VHF Television Tuners/UHF Television Tuners/FM Radio Tuners/CATV Converters   | Television and Radio Industry   |
| Mt. Holly Springs, Pennsylvania                 | Quartz Crystals/Crystal Filters and Discriminators/Crystal Controlled Oscillators   | Military and Aerospace Communications Equipment/Computers/Modems/Medical Electronic and Monitoring Equipment/Copy Transmitting Equipment/Avionics/Paging Systems  |
| Hoosick Falls, New York                         | PTFE Materials and Fabrics (Glass-Reinforced Tapes/Pressure Sensitive Tapes/Sheet Material/Belts/Coated Yarns/Spray Coating/Sealants/Copper and Aluminum Clads)   | Aircraft and Aerospace/Electric Wiring Insulation/Photographic and Food Processing/Industrial and Commercial Plumbing/Textile and Paper Processing  |
| Hoosick Falls, New York                         | Adhesive Coated Plastic Films/Metal Foils and Laminates   | Automotive, Computer and Communications Industries/Military and Aerospace Applications (With Emphasis on Printed Circuit Applications)  |
| Coventry, Rhode Island                          | Plastic Coated Yarns (Vinyl Coated Nylon and Rayon Braid Yarns/Vinyl Coated Fiberglass Yarns/Thermo-set Plastic Coated Yarns)   | Window Screening/Wiring Harnesses for Trucks, Farm Machinery and Other Heavy Equipment/Weaving of Heavy Industrial Fabrics/Automotive and Home Upholstery Fabrics   |
| Franklin, New Hampshire                         | Metal Clad and Unclad Laminates (Epoxy Glass Sheet Laminates/Multi-Layer Materials/Polyimide Laminates/Geometric Configurations/Custom Production Shapes)   | Single or Double Faced High Density Packaging for Printed Circuit Board and Related High Temperature Applications (Used in Computers and Data Processing Equipment)   |
| Anaheim, California                             | Illuminated Pushbutton Switches/Indicator Lights/Rotary Switches  | Computers, Computer Peripheral and Data Processing Equipment/Control Panels for Aerospace and Industrial Applications/Space Vehicle Ground Checkout Systems/Signaling Equipment/Communications, Transportation and Recreation Equipment |
| Van Nuys, California                            | Miniature Wire Wound and Non-Wire Wound Trimming Potentiometers/Miniature Test Connectors   | Airborne Radar and Communications Systems/Guidance Control Systems in Missile Applications/Computers and Data Processing Equipment  |
| Torrance, California                            | Miniature and Subminiature Incandescent Lamps/Quartz Halogen Lamps/Neon Lamps/Lighting Assemblies   | Aircraft Flight and Ground Support Panels/Aircraft Instruments/Readout Devices for Panel Systems/TV and Communications Equipment/Medical Equipment  |
| Hinsdale, Illinois and Princeton, Illinois      | Gas Controls and Components (Oven Thermostats/Valves/Burners/Ignition Equipment/Pressure Regulators/Heating Controls)   | Industrial and Commercial Gas Ranges/Domestic Space and Central Heating Units   |
| Aurora, Ontario, Canada                         | Infinite Controls/Hydraulic and Bi-Metal Thermostats/Appliance Switches/Rotary Switches/Snap-in Devices   | Home and Industrial Appliances/Laboratory Equipment/Data Processing Equipment/Military Equipment  |
| Mexico City, D.F.                               | Gas Controls and Components (Manual Valves/Ignition Equipment/LP Regulators and Valves/Automatic Controls)  | Industrial and Commercial Gas Ranges/LP Gas Tanks and Cylinders   |
| Caracas, Venezuela                              | Gas Controls and Components (Manual Valves/Ignition Equipment/LP Regulators and Valves/Automatic Controls)  | Industrial and Commercial Gas Ranges/LP Gas Tanks and Cylinders   |
| Norwich, England                                | Hydraulic Thermostats/Energy Regulators/Relays/Rotary and Toggle Switches/Snap-in Devices/Oak Rotary and Moduline Switches/Crystal Filters/Indicator Lights   | Home and Industrial Appliances/Test and Laboratory Equipment/Missile and Aircraft Systems/Automatic and Process Control Equipment/Industrial Controls/Commercial and Office Equipment/Computers/Communications Equipment                |
| Pietermaritzburg, South Africa                  | Energy Regulators/Thermostats/Infinite Controls/Rotary Switches/Snap-in Devices/Indicator Lights/Relays   | Home and Industrial Appliances/Educational Teaching Aids/Industrial Controls/Military and Communications Equipment  |
| Malvern Link, England                           | Gas Range Components (Oven Thermostats/Safety Devices/Valves/Filters/Ignition Equipment/Miscellaneous Fittings)   | Industrial and Commercial Gas Ranges  |
| Emmen, Holland                                  | Rotary, Pushbutton and Moduline Switches/Indicator Lights/Illuminated Pushbutton Switches/Miniature Wire Wound Trimming Potentiometers  | Data Processing and Business Machines/Scientific Instruments/Industrial Electronic Equipment/Military Equipment   |
| Electrogiri, India                              | Rotary Switches/Industrial Relays   | Appliance Controls/Communications Systems/Data Processing Equipment   |
| Kowloon, Hong Kong, B.C.C.                      | VHF and UHF Television Tuners/FM Radio Tuners   | Television and Radio Industry   |
| Kawasaki, Japan                                 | Sources and purchases parts and components  | All O/E/N companies and licensees   |
| Los Altos, California and Inglewood, California | <i>Representing:</i> Oak Switches, Stepping Switches and Rotary Solenoids, Appliance Switches, Vibrators/Hart-Advance Relays, Voltage Sensing Devices, Linear Solenoids/Techno Potentiometers. At Los Altos only: Marco-Oak Indicator Lights and Presslites/McCoy Quartz Crystals, Filters, Oscillators |   |
| Ft. Lauderdale, Florida                         | <i>Representing:</i> Oak Switches, Stepping Switches and Rotary Solenoids, Appliance Switches, Vibrators/Hart-Advance Relays, Voltage Sensing Devices, Linear Solenoids/Techno Potentiometers/McCoy Quartz Crystals, Filters, Oscillators   |   |
| Minneapolis, Minnesota                          | <i>Representing:</i> Oak Switches, Stepping Switches and Rotary Solenoids, Appliance Switches, Vibrators/Hart-Advance Relays, Voltage Sensing Devices, Linear Solenoids/McCoy Quartz Crystals, Filters, Oscillators   |   |



## **POLICIES AND OBJECTIVES**

### **EARNINGS**

It shall be the objective of O/E/N to obtain a minimum annual return on investment of 15 per cent and a minimum net profit position of 6 per cent to sales.

### **DIVIDENDS**

It shall be the policy of O/E/N to distribute cash dividends on a basis to provide shareholders with a reasonable annual return while retaining adequate funds for reinvestment in the business.

### **MANAGEMENT**

It shall be the policy of O/E/N to encourage autonomous operation of each subsidiary and division within the framework of overall corporate policies and objectives.

### **ACQUISITIONS**

It shall be the objective of O/E/N to acquire profitable companies in the components and materials field on a basis beneficial to both ownerships.

### **EMPLOYEES**

It shall be the policy of O/E/N to provide an atmosphere for the development of individual employee responsibility and sense of participation in the success of the corporation.

### **PHILOSOPHY OF LEADERSHIP**

It shall be the policy of O/E/N to set a standard of excellence above the level of competition.

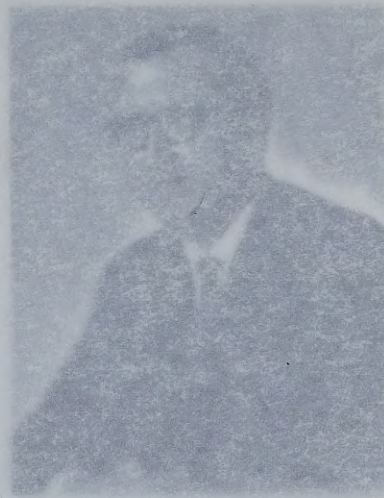
### **BUSINESS**

It shall be the policy of O/E/N to confine its business to the components and materials field.

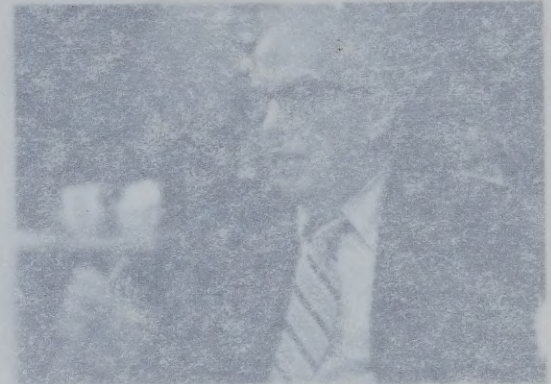
### **FUTURE**

It shall be the policy of O/E/N to achieve recognition as the world's most respected components producer . . . with engineering, marketing and production capabilities in each and every major world market.





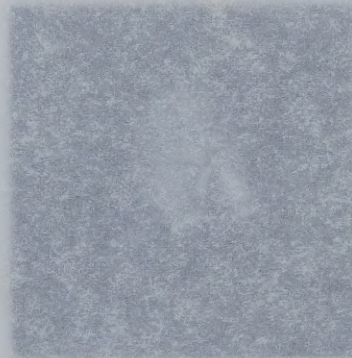
George B. Hamilton  
Chairman, Executive Committee



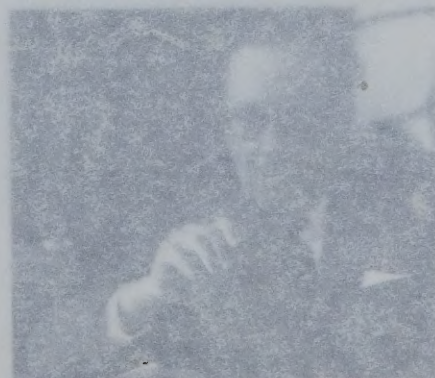
Robert A. Cooper  
Vice President, Research and Planning



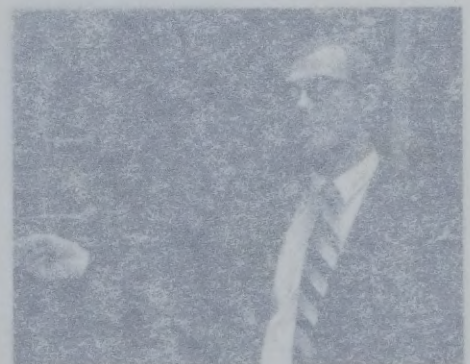
R. Douglas Wilber  
Treasurer



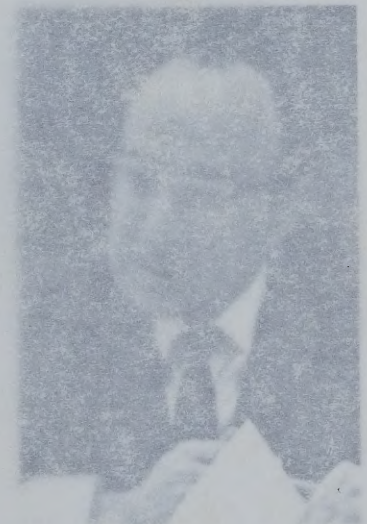
Edwin C. Wolf  
Director



Leo Jedynak  
Director, Corporate Research



Carl J. Bradshaw  
Vice President, Corporate Development



John Cassano  
Vice President, Corporate Relations

OFFICERS

Robert A. Cooper  
Vice President, Research and Planning

Edwin C. Wolf  
Director

R. Douglas Wilber  
Treasurer

Carl J. Bradshaw  
Vice President, Corporate Development

John Cassano  
Vice President, Corporate Relations

Morgan H. Cooper  
Vice President, Research and Planning

R. Douglas Wilber  
Treasurer

Edwin C. Wolf  
Director

Robert A. Cooper  
Vice President, Research and Planning

Carl J. Bradshaw  
Vice President, Corporate Development

CORPORATE DATA

General Office  
One North Dearborn Street  
Chicago, Illinois 60610

Annual Meetings  
The First National Bank of Chicago  
Chicago, Illinois

Stock Transfer Agents  
The First National Bank of Chicago  
Chicago, Illinois

First National City Bank  
New York, New York

Registrars  
The Northern Trust Company  
Chicago, Illinois

Trusts Under the  
Trusts Act of 1937

Trusts Under the  
Trusts Act of 1937

Trusts Under the  
Trusts Act of 1937

Trusts Under the  
Trusts Act of 1937

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## POLICIES AND OBJECTIVES

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### FUTURE

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## O/E/N OFFICERS

**Everitt A. Carter**  
*Chairman of the Board*

**Frank A. Astrologes**  
*President*

**Robert T. McTigue**  
*Senior Vice President*

**Carl J. Bradshaw**  
*Vice President, Corporate Development*

**John Cassato**  
*Vice President, Corporate Relations*

**Morgan H. Cooper**  
*Vice President, Research and Planning*

**R. Douglas Wilber**  
*Treasurer*

**Edwin C. Wolf**  
*Secretary*

**Helen O'Connell**  
*Assistant Secretary*

**Eugene N. Meyer**  
*Controller*

## CORPORATE DATA

**General Offices**  
Crystal Lake, Illinois

**Annual Meeting**  
The Annual Meeting of the Corporation will be held at its general offices in Crystal Lake, Illinois, at 10:00 A.M., May 7, 1971.

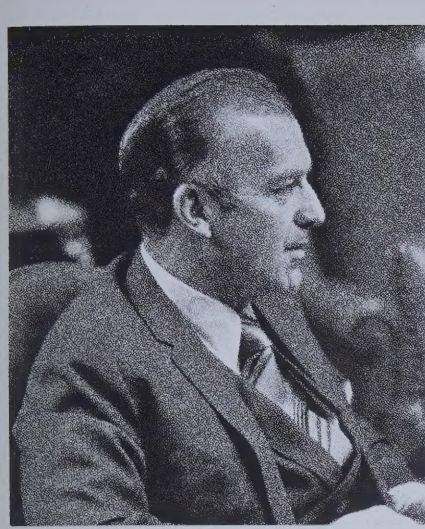
**Stock Transfer Agents**  
The First National Bank of Chicago  
Chicago, Illinois  
First National City Bank  
New York, New York

**Registrars**  
The Northern Trust Company  
Chicago, Illinois  
The Chase Manhattan Bank, N.A.  
New York, New York

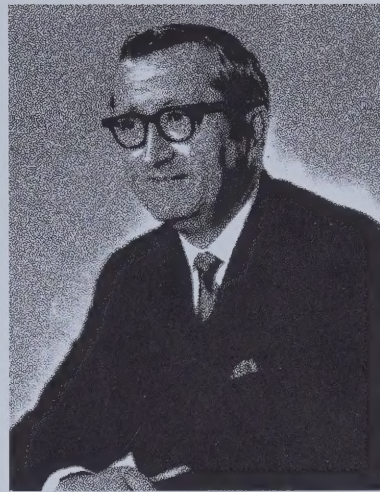
**Trustee Under the Debentures**  
The Northern Trust Company  
Chicago, Illinois  
First National City Bank  
New York, New York  
New York Authenticating Agent

**Stock Exchanges**  
New York Stock Exchange  
Midwest Stock Exchange

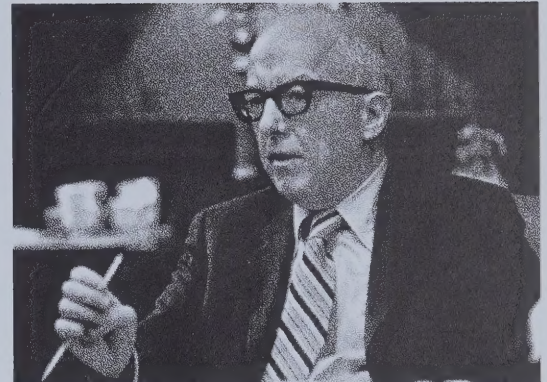




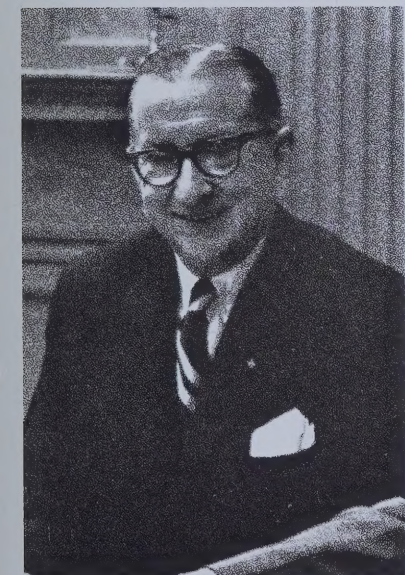
**Everitt A. Carter**  
*Chairman of the Board*



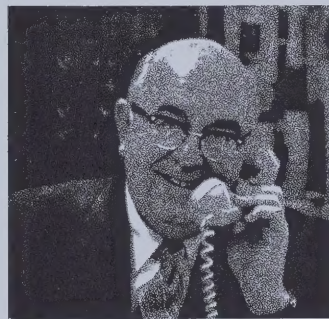
**Frank A. Astrologes**  
*President*



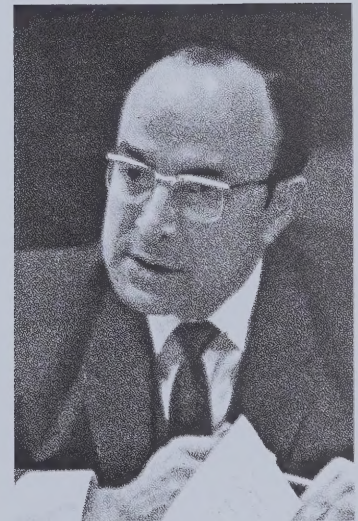
**Robert T. McTigue**  
*Senior Vice President*



**Albert A. Morey**  
*Chairman, Executive Committee  
Marlennan Corporation and  
Chairman of the Board,  
Natkin & Company*



**Luther W. McCoy**  
*President, McCoy Electronics  
Company*



**Carl J. Bradshaw**  
*Vice President, Corporate Development*



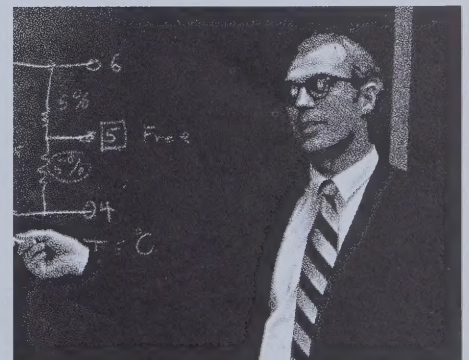
**Norman Waite**  
*Partner, Schiff Hardin Waite  
Dorschel & Britton*



**Philip S. Harper, Jr.**  
*President, Harper-Wyman Company*



**George B. Hamilton**  
*Chairman, Executive Committee*



**Leo Jedynak**  
*Director, Corporate Research*





OAK ELECTRO/NETICS CORP

CRYSTAL LAKE, ILLINOIS 60014